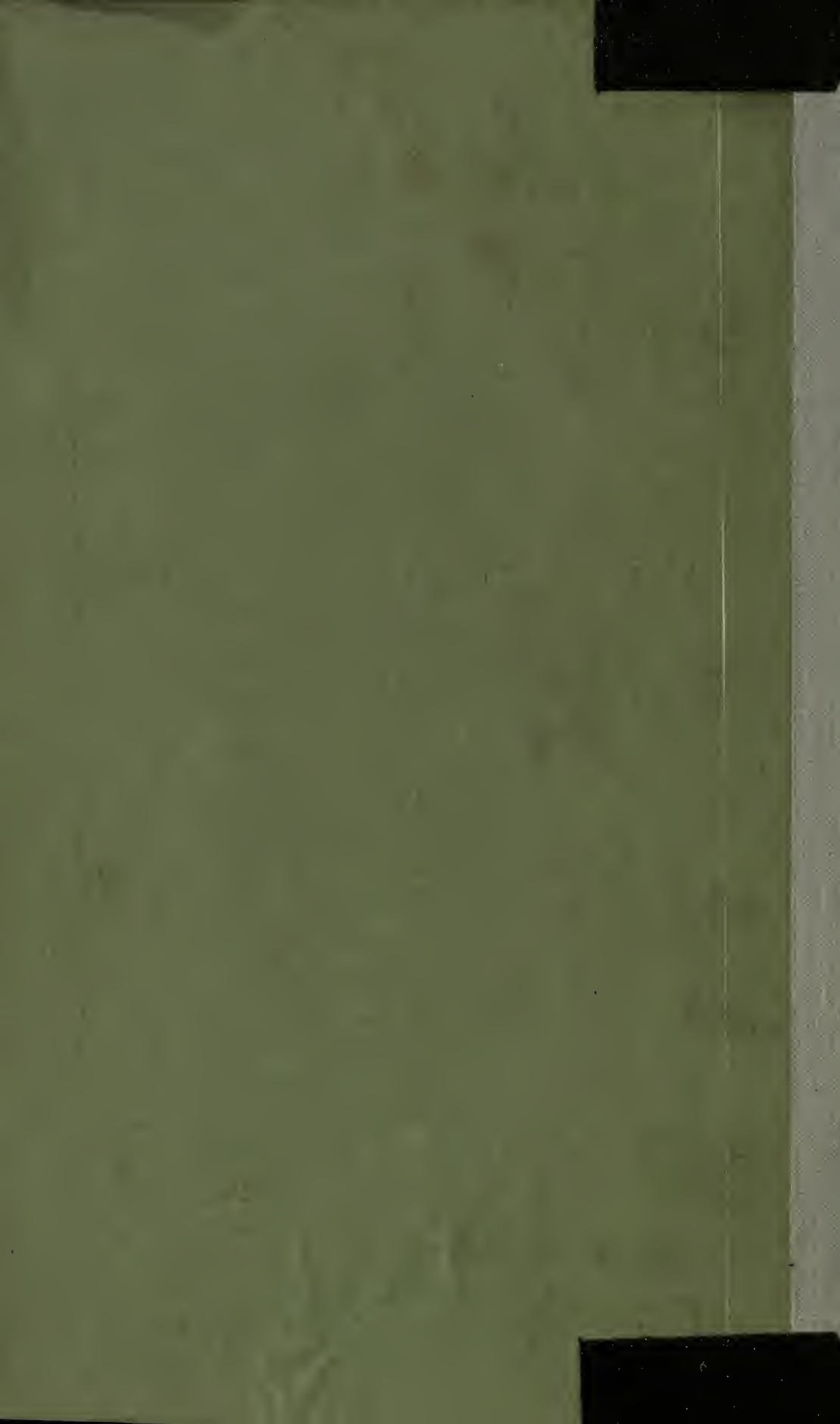


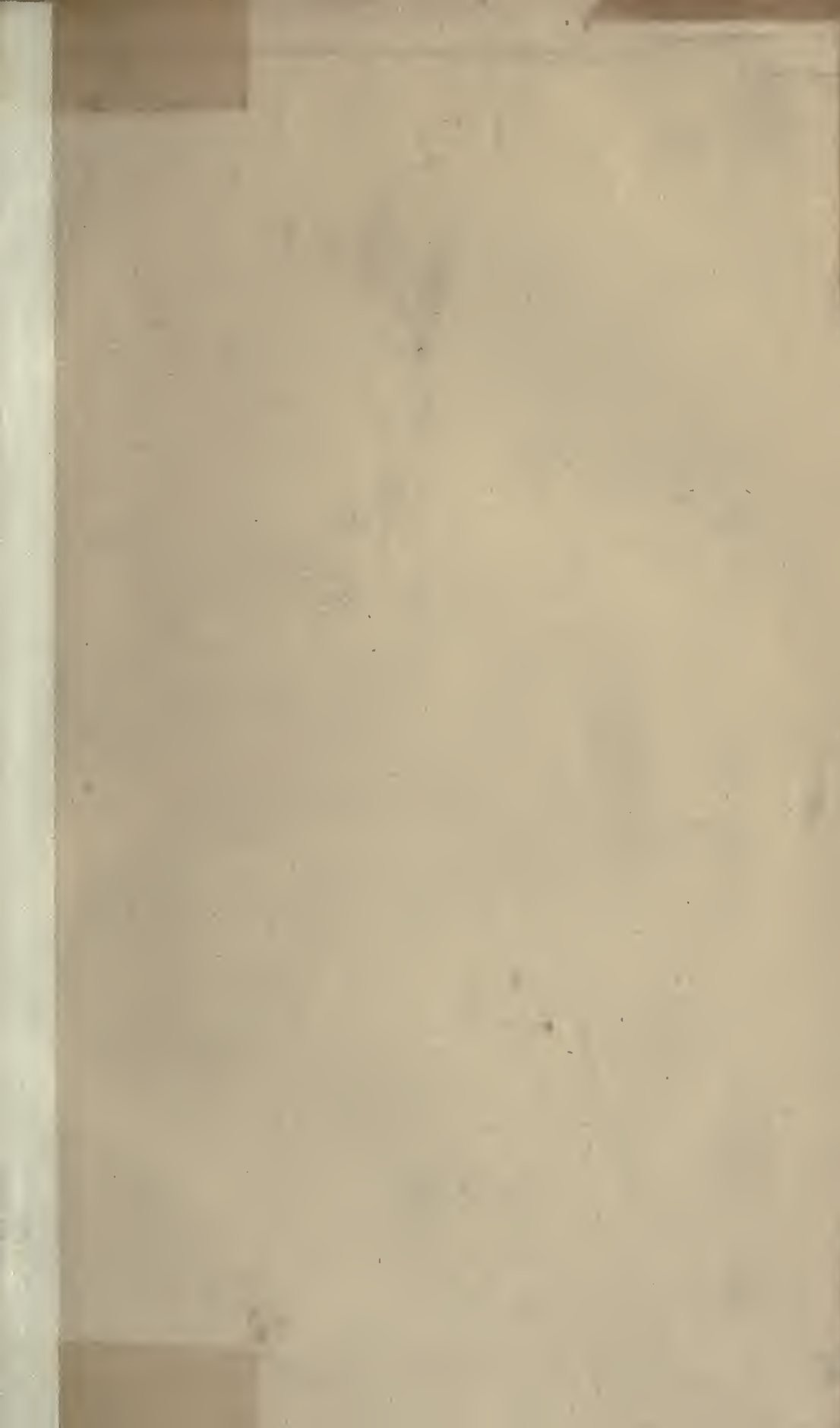


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REMARKS

ON THE PRODUCTION OF THE

PRECIOUS METALS,

AND ON THE

DEPRECIATION OF GOLD.

BY

MONS^R. MICHEL CHEVALIER,

Member of the Institute of France,
&c. &c. &c.

TRANSLATED BY

D. FORBES CAMPBELL, Esq.

LONDON:

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N.B. All MONS^r. CHEVALIER'S calculations are made in *fine* gold or silver; that is to say, free from alloy.

According to the Paris Mint regulations—

1000 kilogrammes of fine gold = 3,444,444 francs, & 44 centimes.
1000 ditto silver = 222,222 ,, 22 ,,
1 franc contains $4\frac{1}{2}$ French grammes of fine silver.
French gold coin contains 29 centigrammes of fine gold to the franc.

According to the English Mint regulations—

1 pound troy of standard gold ($\frac{11}{12}$ fine) = $44\frac{1}{2}$ guineas,
or £46 14 6.
1 ounce troy of standard gold ($\frac{11}{12}$ fine) = £3 17 10 $\frac{1}{2}$.
Consequently, 1 pound troy of fine gold is worth £50 19 5 $\frac{1}{4}$.
A sovereign contains 113·001 grains troy, or 7 grammes and
318 milligrammes of fine gold.
1000 kilogrammes = 2679 + pounds troy.
1000 kilogrammes of fine gold = £136,571 4 10.
1000 pounds troy = 373 + kilogrammes.
1 ton avoirdupois = 1016 + kilogrammes.
1 milliard of francs, at the exchange of 25 francs per
£ sterling = £40,000,000 sterling.

TO
THOMSON HANKEY, JUN., ESQ.,

GOVERNOR OF THE BANK OF ENGLAND,

&c. &c. &c.

DEAR SIR,

The British Public are under obligation to you for the trouble which you have taken, and the condescension you have shown, in presenting them with an English version of Mons^r. Leon Faucher's paper "*On the Production of the Precious Metals, &c.*"---a paper containing a vast amount of highly interesting and useful information. At the same time that I readily admit its numerous merits, and thank you for the pleasure I have derived from the perusal of your masterly translation, I must, with becoming diffidence, call in question the accuracy of some of Mons^r. Faucher's data, and altogether dissent from his conclusions.

Do not think me presumptuous, still less original: I only follow in the wake of Baron de Humboldt and Mons^r. Michel Chevalier.

The former of these gentlemen is certainly the highest living authority on these matters. At first he was inclined to treat lightly the Californian discoveries, but I have reason to know that he has since altered his opinion, and arrived at diametrically opposite conclusions from those of Mons^r. Leon Faucher.

In France, Mons^r. Michel Chevalier ranks "*facile princeps*" amongst political economists. That gentleman having kindly placed at my disposal a portion of an unpublished work of his upon the identical points treated by Mons^r. Leon Faucher, I have been induced to prepare the following translation of it. I feel confident you will peruse it with attention, in accordance with the precept "*Audi alteram partem.*"

At the end of Mons^r. Chevalier's paper you will find a few comments of my own on some passages of Mons^r. Leon Faucher, to which I respectfully demur.

In an Appendix, I have caused to be reprinted two very able articles from the pen of our mutual friend, Mr. M. B. Sampson, which appeared in "*The Times*"

newspaper, on the 21st June, and 6th August last, and also the elaborate tables of Mr. Wm. Birkmyre, published by the same journal, on the 21st May, 1852.

After a rigid examination of these and other papers, and a prolonged and careful investigation of the subject, I have arrived at the same conclusion as Mons^r. Chevalier, namely *that the supplies of gold now pouring into Europe, must, at an early period, occasion an immense rise in the price of all commodities.* The enhancement of prices hitherto produced has certainly not kept pace with the increasing abundance of gold. But let its depreciation once become perceptible in the rise of the prices of the necessaries of life, of wages and of rents, and we may expect to see the public suddenly push the advance in prices as much above the point warranted by the augmented supplies of gold, as these prices are now, in my opinion, below that point.

In considering the effects which the anticipated depreciation of gold will have upon Bankers, Proprietors of Bank Stock, the Annuitant class, and all individuals whose capital is in the shape of money, Mons^r. Chevalier has not pursued his argument to its full logical conclusions. The position of those

classes of persons will closely resemble that of any dealer who keeps on hand a stock of some commodity which is constantly deteriorating.

To compensate themselves for this disadvantage, will not bankers, and especially the lenders of money on mortgage, find it necessary to exact a higher rate of interest?

When I consider the preference which may be anticipated on the part of the public for investments in land and other kinds of *real* property, rather than in the Funds, and contemplate the active demand for capital which Australian emigration and trade are creating, I am fortified in my conjecture that the rate of interest in this country is far more likely to advance than to recede.

To our landed proprietors, now heavily burdened with mortgage debts and family settlements, the depreciation of gold will afford relief: at least in cases where the mortgages are not liable to immediate foreclosure, and the proprietors are not hampered by long leases.

Should the influx of gold continue on the present extraordinary scale, a rapid rise in the price of silver will be inevitable. The first practical inconvenience

in this country, arising therefrom, will be felt when standard silver, now worth 5s. 1 $\frac{3}{8}$ d. per oz., or 61s. 4 $\frac{1}{2}$ d. per lb. troy, shall have risen above the Mint rate of 66s., at which it is now coined. Our full-weight silver coin, will thereupon, find its way to the melting-pot. To provide against such a contingency --- a no very distant one --- and protect the public from the great inconvenience which would arise from an inadequate supply of silver change, our Government will require to debase, betimes, the standard of our silver coinage. By coining the pound Troy of standard silver into 80 instead of into 66 shillings as at present, the inconvenience would be staved off, not permanently, but for some years to come.

In the United States of America, a law, deteriorating to the extent of 6.91 per cent. all the coins below a dollar, has been recommended for adoption by a Committee of Congress appointed to consider the subject.

The forethought and enlightened policy of the East India Company has guarded against the displacement of the silver currency of our Indian Empire. Eschewing the exploded heresy of a double

standard, they devised a monetary system which is more consonant with sound economical principles than that of any European nation. The Company's gold mohur, of the same weight and fineness as their silver rupee, though generally received as 15 rupees, is wisely *not made a legal tender*; and should gold fall below that proportion to silver, the value of the mohur will simply undergo a corresponding diminution.

This is the very system which Mons^r. Michel Chevalier is urging his countrymen to adopt in France; where, during the last two years, gold has been gradually displacing the silver currency. Three-fourths of the entire metallic circulation of that country is still silver. Should the Imperial Government, (as is highly probable) adopt Mons^r. Chevalier's recommendation, and either demonitize gold altogether, or cease to coin more of that metal, the effect of either course would be instantly felt in our bullion market, and in the rate of exchange between London and Paris.

Both Mons^r. Leon Faucher and Mons^r. M. Chevalier, take much pains to prove that the production of silver is on the increase: of course such a counter-

vailing cause would, *pro tanto*, check the depreciation in the *relative value of gold to silver* ; but the concurrent depreciation of the two metals—the diminution of their power of purchase, will assuredly render the general advance in the prices of all descriptions of property, only more general and certain, without in the least retarding *the depreciation of gold in relation to commodities in general*.

Wishing you a happy new year,

I remain, yours sincerely,

D. FORBES CAMPBELL.

61, *Pall Mall, St. James's,*
London, January 1st., 1853.

REMARKS
ON THE
PRODUCTION OF THE PRECIOUS METALS,
AND ON THE
DEPRECIATION OF GOLD.

Gold and silver, or as economists term them, the precious metals, are truly political engines. Either their extreme abundance or their extreme scarcity exercises a powerful influence on the transactions of commerce, and the distribution of wealth, and either of these contingencies may occasion profound perturbation in a mercantile country.

When mankind, by common consent, and with an unanimity which is deserving of notice, selected these two metals to serve as coin or measures of value, and equivalents for every other exchangeable article, it was because they combined the following intrinsic properties, viz.

1st. Utility as articles of consumption, independent of their functions as coin.

2nd. Non-liability to deterioration, ease of transport, and little cost of preservation.

3rd. Perfect similarity wherever produced, and facility for being tested.

4th. Wonderful susceptibility of infinitesimal subdivision.

5th. The great value they contain in small bulk.

Lastly, the circumstance of the value of these two commodities being (as compared with other costly articles of small bulk,) little subject to fluctuation, doubtless exercised a decisive weight in the choice.

The functions of coin require that the material of which it is made should nearly approach—it can never attain—the condition of fixity of value; for were the material so selected subject to great and sudden fluctuation in value, it is evident, that in employing it as the standard by which all the productions of human industry are to be appraised and exchanged, we should introduce into business transactions an element of uncertainty which would hamper and derange them.

In order that any commodity may maintain for any length of time a uniform value in the market, certain conditions must be fulfilled. It is indispensable that it should be obtainable at almost all times, and at the same amount of cost. It is further necessary that it should be subject to a regular and equally balanced demand and supply on the part of the public; or if the demand and supply vary, that the

proportion of the former to the latter should remain unchanged.*

These conditions are pretty fairly fulfilled by gold and silver, at least when we embrace a period of time exceeding in duration the range of the most protracted business transactions. On the whole, the mines of these metals vary but little in their yield from year to year. One very influential reason why the relation between the supply and the demand undergoes but very slight modifications during any given period of time is, that the quantity of metal extracted in any one year forms but an insignificant fraction of the permanent supply in the shape of bars in the hands of bullion dealers, of coin in circulation, and of all the gold and silver articles held for sale.

It is however true, that from time to time, in the course of centuries, we witness a startling suspension of the causes which combine to render the value of the two metals tolerably steady, and which make

* It is not strictly correct to say, that the value remains *absolutely* the same, because the relation between the supply and the demand has not varied. Suppose the supply to increase tenfold, and the demand to increase tenfold also, it does not follow that the value will not experience some variation. What is true, is that the value depends *on the relation between the supply and the demand*. To employ a mathematical term, the value is a *function* of that relation: but it is influenced likewise by the absolute extent of the supply and demand, and moreover may be affected by other causes. Mr. J. S. Mill has admirably explained in his "*Principles of Political Economy*," how value is constantly regulated by supply and demand.

them, with more or less accuracy, the absolute standards for the measurement of the value of every other commodity. New mines are discovered, which combine indications of extraordinary richness with unusual facilities for working; or new processes are introduced, whereby a greater quantity of metal is extracted, and a saving in expense is effected. The one of the precious metals which is affected in the manner described, (and both of them, if both are so affected) declines in value, or in its purchasing power in respect of commodities in general; provided always that no concurrent influence has lowered the value of those commodities. The reverse effect is observable at certain periods of history. The extraction of gold and silver may be temporarily suspended by war, or some catastrophe which renders labour insecure. Or some violent and prolonged rupture may occur in the relations of the countries which produce, and of the countries which receive, the gold and silver. Such events must, sooner or later, enhance the value of gold and silver as compared with commodities in general, and alter their own relative value, when one of the metals only has been so affected, or affected to a greater extent than the other. The partial or total exhaustion, or a falling off in the richness of the mines in working, would, it is evident, produce a similar result.

History tells us of several periods when the effects which we have just indicated in general terms were

severely felt. The most remarkable, as well as the most classical instance, and the one which presents itself most readily to our memory, is that which occurred shortly after the discovery of America. At the close of the fifteenth century, Europe retained only a small portion of the mass of gold and silver which she possessed under the Romans. I do not believe (if I may be allowed to name any specific quantity) that all Europe, at the time referred to, possessed one milliard worth (40 millions sterling) of gold and silver together; namely—300 millions worth (12 millions sterling) of the former, and 700 millions worth (28 millions sterling) of the latter metal. In other words, 300,000,000 times 29 centigrammes of gold, or 87,000 kilogrammes, and 700,000,000 times $4\frac{1}{2}$ grammes of silver, or 3,150,000 kilogrammes. A large quantity of both metals had been buried or otherwise concealed in the times of barbaric invasion and devastation, and had so been lost. Another, and in the course of centuries a very large proportion, had disappeared in imperceptible particles, through the constant abrasion of the coin, and the wearing away of the utensils made from the precious metals. A third, and very considerable portion, had been exported to the East, in payment of merchandize imported from India, China, and the countries supplying spices. Lastly, the art of mining had for a long period remained dormant in Europe; and it

was only then awakening from its lethargy. At this conjuncture Christopher Columbus discovered a new world, rich in gold and silver mines.

The gold mines were those which had been principally worked by the natives; and at first, gold was the metal which was sent in large quantities from America to Europe. Accordingly, in Spain it was gold that first felt the effect of the discoveries, and began to decline in value, as compared with other commodities, and especially as compared with silver. This fact is incontrovertible, M. de Humboldt having demonstrated it by the publication of an edict dated Medina. In fact, the extraction of gold is much simpler than that of silver, and the former pursuit was better suited to the primitive races of Mexico and Peru. The spots where gold is collected are alluvial deposits on the surface of the earth, or at a very trifling depth beneath it; and the metal, from its being in the native state, is obtained by the easy process of washing. Silver, on the contrary, is usually found in combination with sulphur, antimony, and arsenic; and to free it from these substances very delicate chemical processes are required. Besides, it lies embedded in the bowels of the earth, and in veins of hard rock which dip to a great depth, and for the profitable working of which, expensive and complicated machinery is indispensable. It was only subsequently to the foundation by the

Spaniards of their colonies in Mexico and Peru, that the production of silver became important. The miners of Spain, compelled, in some measure, to expatriate themselves by an ordonnance of Charles V., dated 1535, which prohibited the working of the mines in Spain, hurried off to those rich silver districts of the new world, which had already gained celebrity through the *conquistadores*, who pursued with feverish ardour the search after the precious metals. In Mexico, as early as the time of Montezuma, some surface-workings had been carried on at the silver mines of Tasco and other localities. The same took place also at the mines of Porco and Oruro, in Peru, under the Incas. It thus came to pass, that within a very short time after the conquest, there was produced, independently of gold, a quantity of silver, which was really of importance when compared with the quantity supplied by the mines of Europe; for, during the second quarter of the sixteenth century, it is estimated that the silver procured from the mines of America, amounted to 16,000,000 francs, or 72,000 kilogrammes, a figure which was of importance at that period. But while Europeans were exploring the American Continent in quest of mines, without having as yet met with any one of extraordinary richness, chance led a poor Indian goatherd, who was tending his flock in the wild wastes of Upper Peru, to the slopes of an isolated peak, called the *Potosi*, where, aided by the

slight knowledge he had acquired while a workman at the Porco mines, he discovered the lode whose wonderful richness has remained proverbial, and whose name is borrowed from the adjacent mountain. The total yield of silver from the Potosi mine since its discovery to the present time, cannot be estimated at less than six milliards (240 millions sterling) or about 27,000,000 kilogrammes. The produce of that mine deluged Europe with silver. It should, however, be observed that its yield was larger during the period which immediately followed its discovery, namely during the latter half of the sixteenth century, than it has ever been since; in consequence of the veins having diminished, not in extent, but in richness, as the workings were carried deeper. About the same period, mining operations were commenced in Mexico, at Zacatecas, Sombrete, and Guanaxuato, whose lode has acquired world-wide celebrity.

Under the influence of these supplies of gold and silver, procured on more advantageous terms than they could be obtained in the old world, the two metals necessarily declined in value, as compared with provisions and every product of industry. If we take for term of comparison wheat, which we are warranted in regarding as the commodity least liable to fluctuation (on an average of 15 or 20 years) we will find that at Paris, for example, the hectolitre of wheat, which prior to the discovery of America was exchanged for 15 grammes of silver,

could not be bought for less than threefold that amount, in 1620, or about half a century after the depreciation of that metal first became perceptible. The effect on gold was not so great, but it was nevertheless widely felt.

From the middle of the eighteenth century, silver, which had been for a long time stationary, or which had rather shown a tendency to advance in value, once more began to fall. That decline was attributable to the quantities extracted from the mines of Guanaxuato and Zacatecas. On the hypothesis that wheat fluctuates little in value, provided its price be computed on an average of several years, (an hypothesis, by the way, which however plausible, is not susceptible of positive demonstration,) we shall find *that the value of silver declined more than fifty per cent. between the middle and the end of the last century.* In short, the hectolitre of wheat, which was worth 15 grammes of silver at the close of the 15th century, which rose to 45 grammes of the same metal after the first quartér of the seventeenth century, and which, about 1750, was exchanged for 40 grammes, *commanded 90 grammes by the beginning of the nineteenth century.*

The value of gold has undergone less fluctuation. We may assume that at the time of the discovery of America, a given weight of that metal used to be exchanged for fourfold the quantity of wheat it can now command, whereas the purchasing power of silver has diminished sixfold.

Many estimates have been made, with the view of showing the extent of the supplies of gold and silver which occasioned these remarkable depreciations. M. de Humboldt was the first writer who produced calculations, founded, for the greater part, on reliable data. The reader may consult, with benefit, his remarks on this subject in his work on New Spain. He did not carry his enquiry beyond the beginning of the present century. I have continued his calculations, and brought them down to 1848, the year in which the discovery of the mines of California took place, and which forms a new era in the history of the precious metals. After careful study, I even considered myself warranted in slightly altering, but only on subordinate points, the conclusions of that illustrious authority. The result of my computations is that the New World has yielded, from Christopher Columbus' days till 1848, in all 122,050,724 kilogrammes of silver (I mean *fine* silver, that is without alloy) or equal to 27,122 million francs (1,085 millions sterling). Of gold the mines of America have yielded 2,910,977 kilogrammes, which according to the regulations of the French mint, are equal to 10,026 million francs (401 millions sterling). Between the two metals we get thus an aggregate of 37,148 million francs (1,486 millions sterling). The following Table shows the proportions in which the different regions of America contributed to that immense supply:—

Table of the total production of the silver and gold mines of each country in America, prior to the discovery of the gold mines of California, in 1848.

Countries.	Silver.		Gold.		Total for each Country, in Millions of Francs.
	Weight in Kilogrammes.	Value in Millions of Francs.	Weight in Kilogrammes.	Value in Millions of Francs.	
United States . . . . .	.....	.....	22,125	76	76
New Mexico	61,985,522	13,774	389,269	1,341	15,115
Grenada	259,774	58	566,748	1,952	2,010
Peru	53,765,244	13,059	340,393	1,172	14,231
Bolivia					
Brazil . . . . .	.....	.....	1,342,300	4,623	4,623
Chili	1,040,184	251	250,142	862	1,093
Totals	122,050,724	27,122	2,940,977	10,026	37,148

We must not pass over in silence the mines of other countries. They have no doubt been less productive than those of America; still, if out of the total quantities produced, we only take note* of that portion of them which has found its way into civilized countries, the item amounts to about six and a half milliards (260 millions sterling) namely, 2,330,000 francs of silver, and about 4,100,000,000 francs of gold. The sources of this additional supply are shown in the following Table :

* We leave entirely out of our estimate all that has been produced in the interior of those countries to which Europeans are denied access, such as Japan, which is said to possess rich gold mines, and China, in the interior of which there are mines both of gold and silver.

Table of the quantities of gold and silver supplied to the European markets by the undermentioned countries during the three centuries ending in 1848.

Country.	Silver.		Gold.	
	Weight in Kilogrammes.	Value in Millions of Francs.	Weight in Kilogrammes.	Value in Millions of Francs.
Europe, exclusive of Russia	9,000,000	2,000	445,150	500
Russia	1,485,000	330	319,330	1,100
Africa and the Islands of the Malay Archipelago, &c.	.....	.....	725,750	2,500
Totals	10,485,000	2,330	1,190,230	4,100

Overwhelming as may, at first sight appear, this aggregate of $43\frac{1}{2}$ milliards (1,740 millions sterling) yielded by the gold and silver mines of countries enjoying Western or Christian civilization, we cannot suppress the reflection that the annual average is, after all, but unimportant. It even sinks into insignificance, when contrasted with the aggregate product of other branches of human industry during the same interval of three centuries. The manufacture of cotton goods throughout the world, or in England alone, creates a much vaster amount of wealth. Even at the price of coal at the pit's mouth, the total value of that mineral far exceeds that of the precious metals. If we take into account the motive power and other useful purposes to which coal contributes, when it has reached the furnace and aided in the transformation of raw materials into costly fabrics, its value becomes immense. The

united industry of Great Britain would take but a very few years to produce a mass of goods equivalent in value to all the gold and silver which America has produced in three hundred years!

Since 1848, the year to which the preceding table comes down, new features have presented themselves in the production of gold. Gold fields of extraordinary richness, and of vast extent, were discovered in California in 1848, and in Australia in 1851. To convey an adequate idea of the alteration which seems imminent in the value of this metal, we must go back a little further than 1848, and direct our attention to other countries. About twenty years prior to 1848, rich alluvial deposits of gold, extending over an immense surface, had been found in Eastern Russia and Siberia. Between 1819, the date of their discovery and the end of 1847, they yielded 260,000 kilogrammes of gold, which is about equal to 900 million francs (36 millions sterling). The annual production since 1847 is about 30,000 kilogrammes (4 millions sterling).

At the beginning of the present century it is estimated that annually there reached the general market, a supply of 900,000 kilogrammes of silver, representing 200 million francs, and about 24,000 kilogrammes of gold, representing 82 million francs: the aggregate value of the two metals was 82 million francs. In 1848, owing—

1st. To a considerable increase in the supply of gold from Russia.

2nd. To a more plentiful yield of silver in Europe, and

3rd. To a new supply from some parts of Asia; which then, for the first time, began to contribute to the general market, and for the particulars of which I am indebted to M. Natalis Rondot. Owing, I repeat, to these three causes, the production reached 975,000 kilogrammes of silver and 72,000 kilogrammes of gold, or a total value of 464 million francs, $247\frac{1}{2}$ of which were gold, and $216\frac{1}{2}$ silver. A remarkable change had taken place. For several centuries so large a proportion of gold compared to silver had not been witnessed. In the beginning of the present century, the proportion was 1 kilogramme of gold to 38 kilogrammes of silver, or fcs. 2.45 in silver against 1 franc in gold. In 1847 the proportion had become 1 kilogramme of gold to $13\frac{1}{2}$ kilogrammes of silver, or only fc. 0.87 centimes in silver against 1 franc in gold. The average yield of America, from its discovery till 1848, had been 1 kilogramme of gold to 42 kilogrammes of silver, or fcs. 2.70 in silver against 1 franc in gold. Upon the entire supply to the general market during three centuries, the proportion had been 1 kilogramme of gold to 32 kilogrammes of silver, or fcs. 2.09 silver against 1 franc in gold. If the alteration was great in 1848, it has since assumed a more sweeping character. According to

the calculations contained in an official dispatch addressed by M. Emile Chevalier, (who was then at Panama on a mission from his Government) to the French Minister of Foreign Affairs (See *Les Annales du Commerce exterieur*, for 1852, No. 573) the quantity of gold from California, transported during 1850 across the Isthmus, was not less than 469,000,000 francs, or *136,000 kilogrammes.

But to keep our calculation on the safe side, let us assume the total annual production of California at 100,000 kilogrammes. We shall not estimate that of Australia at more than double Siberia, although the best informed men in England are now of opinion, that Australia will soon quite eclipse California. The aggregate annual supply from these two new sources is thus 160,000 kilogrammes or 550,000,000 francs. Supposing the supply of silver to remain stationary, the total annual production of the two metals will amount together to 1

* M. Emile Chevalier mentions that in 1850 a single commercial house at Panama, which, it is true, enjoyed almost a monopoly of this business, forwarded 261,208,136 francs worth of gold dust, which, added to the amount forwarded by another firm, made 268,301,469 francs. To this falls to be added the gold concealed by passengers to evade the payment of freight to the steam boat companies, and the amount of which cannot be precisely ascertained. "A person very conversant with the subject assured me," says M. Emile Chevalier, "that the quantity so secreted amounts to three-fourths of the quantity on which freight is paid; this would give a total of 469,333,333 francs.

milliard of francs (40 millions sterling), of which 232,000 kilogrammes or 800 million francs' worth would be in gold, and 975,000 kilogrammes or 216 million francs' worth would be in silver. This would only give 4 kilogrammes of silver to 1 of gold, or *fc.* 0.27 centimes in silver against 1 franc in gold. The proportion which ruled down to the beginning of the present century has been completely destroyed. The annual production of gold exhibits an increase of 200,000 kilogrammes over 1800, and of 160,000 kilogrammes, over 1847. It must be borne in mind too, that all our calculations are unquestionably much within the truth.

In the preceding pages, when we speak of the extension of the production of gold or silver, the reader has doubtless comprehended that we make such extension conditional on the extraction becoming easier and cheaper. It is plain indeed, that

* According to the latest accounts, Australia was producing 2 millions sterling worth of gold per month: say, at the rate of 24 millions sterling per annum, or three times the quantity assumed by M. Chevalier. If we take the production of California at 136,000 kilogrammes, (and for 1852 it has exceeded that figure,) and that of Australia at 180,000 kilogrammes, (24 millions sterling) the results of the computation would be, 388,000 kilogrammes of gold representing 1,336 million francs, against 975,000 kilogrammes of silver representing 216½ million francs, which give the proportion of 2½ kilogrammes of silver to 1 kilogramme of gold, or *fc.* 0.16 centimes of silver against 1 franc of gold!

D. F. C.

the production of a large surplus of the precious metals, like that of any other commodity, cannot be kept up unless a market can be found for that surplus, and to find that market or outlet, the holders of these metals will be compelled to exchange them for less, according as the quantities offered for sale increase. In former days the mine of Potosi occasioned the severest fall in the value of silver which we have cited, because the expenditure of labour, the total efforts and sacrifices of every kind required for the extraction of a kilogramme of silver from that mine was less than the corresponding outlay at any other mine, and because, moreover, the lode admitted of its being worked on a grand scale. To employ the consecrated phrase of Ricardo, "*the cost of production*" at that mine was less, while the workings were susceptible of extension. When we say that the mine of Potosi was "*very rich*," it is in the above sense that we employ that expression.

As regards gold, the mines of California and Australia fulfil the before-mentioned conditions. Consequently, they must bring about a decline in the value of gold as compared with other commodities.

But in what manner does a decline of this sort take place? As the result of a new element introduced in the relation of the supply to the demand. The supply being greatly augmented, a corresponding demand must needs be created. As we have

just observed, this can only be done by submitting to a sacrifice. Because rings and crosses of gold are very dear, for example, a multitude of persons wear rings and crosses of silver. But if, in order to have the pleasure of presenting a cross of gold to his wife or daughter, a peasant required to give only five days' labour instead of ten, or half a hectolitre of wheat instead of a whole hectolitre, it is probable that there would be a sufficient inducement for him, and many others, to purchase the article of gold.

The fall, it will be easily seen, depends on the extent to which the holders of a commodity are compelled to give way, in order to secure a purchaser. Let us return to the example of the cross of gold. Suppose that agriculture, and trade in general, are in a very prosperous state, and that high wages are being earned both in the agricultural and manufacturing districts. The demand for such an article, and many other articles of the same metal, will become greater than usual. It is not improbable, that under such circumstances, even though there were a more extensive stock of crosses and other trinkets of gold in the market, these articles might still command the same number of days' labour as at a former, slacker, period, when the stock was smaller. As a general rule then, any augmentation of a permanent demand, or creation of a new demand, tends to raise the price, while, on the other hand,

any augmentation of the supply, or falling off in the previous demand, tends to depress the price.

The depreciation in the value of gold and silver which followed the discovery of America, would have been more rapid, and more striking, but for a variety of circumstances, which created a greatly increased demand for these metals. Civilization was expanding--Luxury kept pace with the accelerated prosperity. A taste for ornaments and utensils of the precious metals was introduced. Till then such articles had been possessed only by princes and churches. Countries hitherto without the pale of civilization, like Northern Germany and Russia, began to feel its influences, and needed a supply of the precious metals. In every country a much larger quantity of coin was required for the transactions of an expanding trade. The mass of gold and silver coin which had formerly been found adequate for the transaction of a given extent of business, ceased to be so, and as the metals fell, an augmented stock of coin had to be provided.

In presence of the unprecedented and increasing production of gold, two questions naturally present themselves:

First. Is the depreciation of gold, now imminent, a benefit?

Secondly. To what extent are certain counter-vailing causes likely to neutralize, check, or modify the depreciation which threatens gold?

In answer to the first question, we will but briefly observe, that the fall in the value of gold, like that of any other commodity, *and viewed as such*, is a decided benefit; because every commodity that falls in price becomes thereby more accessible, or rather, less inaccessible, to the bulk of mankind. But the monetary functions performed by gold involve other and higher considerations. A depreciation of gold, viewed as the standard of value, may occasion nothing less than a monetary convulsion. This is a serious view of the case. The means of existence of many persons and families may be crippled; *and, after all, whatever one person may gain, by the derangement of prices and existing contracts, another must lose to the like extent.* It may well be doubted then, if the only remaining advantage, viz. that of procuring, with more ease, or rather, with less difficulty, gold and gilded articles, is calculated to materially increase the comforts of mankind, and exercise such a happy influence on their well-being as will outweigh the sufferings of a considerable portion of the community.

Let us next examine the question, whether in reality, *it is highly probable that gold will undergo a certain and early depreciation.* Among the persons conversant with the subject there are some who seem to incline to the opinion that any important variation in the value of gold in respect to commodities in general, and particularly in respect to silver, is beyond the range of probabilities.

They maintain that there are vast outlets for all the gold which the new mines and gold fields can supply. They rely on the fact that at present several countries are adopting gold as the basis of their monetary systems, and they cite the United States of America and Russia as examples in point. They lay stress on the rapid increase of population, consequent on the protracted peace which the world enjoys, and argue that this increase of population will necessitate a corresponding demand for coin, and for the luxuries and ornaments to which gold is applied. They remind us that new states and settlements are being founded in regions which have hitherto, like Australia, been doomed to solitude. We are told of countries still barbarous, like the central provinces of the Russian Empire, which are awakening to civilization, and of others in decadence, like Turkey, which are being restored to high civilization. Lastly, they rely on the general march of progress throughout the world, which is augmenting the comforts of mankind, and multiplying and extending the refinements of luxury. The inevitable consequence, it is contended, must be a progressive increase in the consumption of the precious metals in general, and of gold in particular.

I admit the presence of one and all of the countervailing causes above enumerated, and I will even indicate several others, which are calculated to retard and counteract the natural results of an

abundant and continuous harvest of gold. Thus, the moment the metal is converted into coin, the depreciation of the gold encounters in the coin itself, a barrier which confines it within certain limits. Let us take for example a country where a milliard of francs, (40 millions sterling,) in gold pieces, constitute its metallic circulation. In round figures, it would form a mass of 300,000 kilogrammes of fine gold. Suppose a fall of one-third to take place in the value of the metal; for that very reason, 3 grammes having no greater value than 2 grammes previously had, the 300,000 kilogrammes would, in the daily transactions of business, only fulfill the functions for which previously 200,000 kilogrammes were sufficient. It would thus be necessary to add to the coinage, such a quantity as would serve the purposes for which 100,000 kilogrammes had previously been required. The entire coinage would consequently require to be increased to 450,000 kilogrammes. Such a vacuum as we have supposed, say 150,000 kilogrammes, would be sensibly felt, and would take time to fill. A similar vacuum would simultaneously occur in other countries, and till such time as it was filled up in them all, gold could not fall below the level of two-thirds of its former value.

But does it follow, in sound logic, from the above and other facts, which are put forward for the purpose of making any serious fall in the value of gold appear highly improbable—does it, we say, really

follow, that gold will remain stationary, or nearly so, even on the supposition, (for after all, we are dealing with a conjecture, though that conjecture is every day approaching nearer to a certainty), that the production will attain, or rather, will maintain, for many years to come, much higher proportions than before the recent discoveries? I confess that I can discover in all the arguments advanced, nothing more than grounds for anticipating *delay*, or slackened progress in the depreciation. Nay, I am of opinion, that this delay, or slackened progress, must, *ere long*, cease. Let us examine consecutively the different reasons that have been put forward.

The United States of America, as well as Russia, we are told, are coining, or storing in their vaults, as security for their paper circulation, large quantities of gold coin. Nothing is more true as regards late years; but for the very reason that this drain has been in operation for a considerable time, it is not destined to be of much longer continuance. If one milliard of francs (forty millions sterling) in gold, amply suffices for the monetary wants of England,* we may conclude, that, for the present, less than one

* In England the currency is entirely of gold. Silver coin in that country only serves the purpose which the copper coinage does in ours. Silver is there a legal tender only as change, and to the extent of 40s. In the United States, on the contrary, both metals have legal currency, the standard being double. Practically, gold is used for payments, as silver commands high and yearly increasing premium.

milliard suffices for the United States, because in the latter country the practice of private individuals keeping on hand a supply of specie, is even more unusual than it is in England. Banking accounts current, which greatly economize the use of coin, are there universally adopted, even in the villages. It must be remarked, too, that in the United States, bank-notes replace specie, even more extensively than they do in England, inasmuch, as the Americans have bank-notes for five dollars in all the States of the Union, and for a still lower denomination, in certain States, and it would be next to impossible to induce them to adopt 10 dollars, or 54 francs, as the lowest denomination of their notes; whereas in the United Kingdom, the lowest Bank of England note is for £5, and the circulation of small notes in Scotland and Ireland is extremely limited. According to this calculation, the United States, to judge from the quantity of gold coined there since the discovery of the Californian mines, must already be supplied with at least one-half of the stock of that metal which is required at its present value, and we exaggerate somewhat in supposing that, to complete their metallic circulation, they may still require 150,000 kilogrammes of gold. That amount of coin would represent 500 millions of francs, or 20 millions sterling. As regards Russia, we may presume that she is still nearer repletion, since, during many years, the Russian Government has

coined and deposited in the vaults of the fortress of St. Peter and St. Paul, at Petersburg, a large portion of the gold produced by their own mines, in order that it may serve as security for the paper money, which circulates throughout that empire, and answers all the purposes of trade. We will allow a wide margin, and estimate her additional wants at 150,000 kilogrammes of gold. As for Turkey, without decrying that country, and while paying a due tribute of respect to some of her statesmen who are striving to regenerate its institutions, we must add, with regret, that their progress is slow, and the quantity of gold which that country seems destined to absorb, both for coinage and other wants, appears likely to be very insignificant for a long time to come.

Unquestionably there are countries where civilization but recently introduced, is rapidly spreading. Striking examples of this are presented by Australia and her dependencies, as well as by California, Oregon, and several regions of central America. Of these countries, some will coin gold, and perhaps employ gold exclusively, or which comes to the same thing, they will receive back from Europe in the shape of coined money, for the transaction of current business, a fraction of the gold transmitted thence in bars or dust. As regards Australia,* at least there

* It is estimated that up to the present time, (November 1852,) Australia has imported from England, four millions sterling in sovereigns. As much more is now on its way out.

can be no doubt on the subject. But we shall exceed all the bounds of possibility, if we suppose, for the sake of argument, (what does appear to me a great exaggeration) that during the next ten years, these countries, and Turkey together, may absorb for their metallic circulation, gold to the extent of one milliard of francs, (40 millions sterling) or about 300,000 kilogrammes.

With reference to the requirements of luxury, the employment of gilding, which is constantly extending, the increasing manufacture of trinkets in gold, if we soberly investigate the quantity of metal consumed by these different branches of trade, we shall not fail to admit that it is trifling indeed, when contrasted with the anticipated increase in the production of gold. Articles made of gold are always very light, while in gilding, a kilogramme of that metal will go farther than our imagination can conceive. The gold, in fact, is beaten out into leaves of the thinness of the ten millionth part of a metre. Consequently, a cubic metre of solid gold, weighing, it is true, 19,258 kilogrammes, and equal in value to 3,316,000 pieces of 20 francs each (or £2,652,800 sterling), would suffice to gild a superficies of 1,000 hectares (2,471 acres). What an immense number of gilt frames might be spread over such a space. Compared with it, what are all the gold mouldings scattered over our apartments? With 1000 kilogrammes we might cover a superficies of 52 hectares

(128 acres), a vast space, and probably larger than the aggregate of every gilt surface in the world. The gold which is used in the manufacture of lace is still more attenuated. It is calculated that the coating of gold on silver wire may be made twelve times as thin as leaf gold; so that a gramme of gold, which costs at present fr. 3, 44 cts. (2s. 9d. sterling) is sufficient to gild a wire 200 kilometres (2187 yards) long.

It is difficult to offer a precise estimate of the quantity of gold which is used by jewellers and goldsmiths, for they often re-melt old articles. M. de Humboldt, who investigated this subject, and who collected all the data available, in 1824, estimated the consumption at 9,200 kilogrammes for the whole of Europe. But if, as Necker surmised, (upon data which M. de Humboldt is not disposed to reject,) one half only of the precious metals employed in the manufacture of gold and silver plate and trinkets, be new, the complementary supply of gold did not, in 1824, exceed 4,600 kilogrammes. Moreover, the official returns made up by the "*bureaux de garantie*" (goldsmith's hall), and of which we shall shortly avail ourselves in the cases of France and England, prove that the consumption of gold in jewellery does not increase rapidly, so that we shall be considerably above the truth, if, by way of allowance for the changes which have taken place since 1824, we double the 4,600

kilogrammes of gold, then consumed. According to the preceding data, which are somewhat overstrained, we get 9,200 kilogrammes as the quantity of gold which at present is annually absorbed by the goldsmiths of Europe, provided always the above-cited hypothesis of Necker be correct. We will, however, take it at 15,000 kilogrammes, in order to make some allowance for the articles in gold manufactured in America and the Colonies, though their number is limited, and especially in order to silence all demur in reference to the proportion of old articles which enter into the manufacture of new goods. And to allow largely for the probable spread of luxury from the present time, we will add 5,000 kilogrammes more, and thus reach a total of 20,000 kilogrammes. That figure will amply represent the average quantity of new gold which is likely to be annually absorbed by the goldsmiths during the next ten years, on the presumption that gold shall retain its present value; on the presumption too that nothing shall occur to arrest or even impede among civilised nations, the onward movement of prosperity which leads mankind to employ gold for the ornament of their persons and habitations.

I think this is the proper place to explain fully the grounds of my conviction, that the progress of comfort and luxury does not appear calculated, so long at least as gold shall retain its present value, to offer a rapidly-increasing outlet to the quantities

of that metal supplied by the mines. This remark is likewise applicable to the other precious metal—silver. On this subject the returns of the “*bureaux de garantie*” supply ample proof. M. de Humboldt tells us that in 1809 the “*bureaux de garantie*” of 86 departments of France, tested and stamped articles weighing 2,634 kilogrammes of gold, and 61,867 kilogrammes of silver. According to official documents to which I have had access, for the years 1824, 1825, and 1826, (a period during which the manufacture of gold and silver articles was more active than during any other three years of the Restoration), I find that the articles in silver contained of silver, old and new, 65,555 kilogrammes, and that during the years 1836, 1837, and 1838, (which were particularly prosperous years of King Louis Philippe’s reign), the average quantity was 70,965 kilogrammes. It only reached 78,706 kilogrammes during 1844, 1845, and 1846, which too, were years of great prosperity. The average weight of articles in gold was, for 1824, 1825, and 1826, 3,760 kilogrammes ; for 1836, 1837, and 1838, it was 4,483 kilogrammes ; and in 1844, 1845, and 1846, it reached 5,753 kilogrammes. The increase in the gold is more perceptible than in the silver, but, on the whole, the increase is insignificant, for at the end of 20 years, it is only 2,003 kilogrammes, for a country which is a large manufacturer of this description of article, and far the

largest, if we may judge from the quantities presented for inspection at the "*bureaux de garantie*."

The returns which have been placed at my disposal come down to 1850 inclusive, but we shall leave out 1847, which was a year of general distress, when articles of luxury, as might be expected, were in diminished demand. For the like reason we shall exclude 1848 and 1849, when republican excesses and follies had turned society topsyturvy. During 1850, which was comparatively a tranquil and prosperous year, the silver articles amounted to 57,217 kilogrammes only, and the gold to 5,256 kilogrammes. To the above amounts falls to be added for each of the years before specified, a certain quantity of silver which is worked into wire or thread. This quantity usually amounts to about 10,000 kilogrammes of silver. It is worthy of notice, that in 1850 the quantity so employed did not exceed by more than 350 kilogrammes, what was used 32 years prior, viz. in 1818.

The increase in the manufacture of articles from the precious metals is thus slow. The luxury of our days has democratic features. It is very calculating and economical. It is lavish of gold and silver gilding, but requires few massive articles in silver, and still fewer in gold.

The same observation will apply to England, and with still greater force. The returns published by Mr. Porter afford proof of this. In that gentle-

man's noble work, entitled "*The Progress of the Nation*,"* will be found "*A table, exhibiting the number of ounces of gold and silver plate upon which duty was paid, and for which drawback was allowed, showing the quantity retained for home use, in each year, from 5th January, 1800, to 5th January, 1850*," whereby he established the curious fact, that during the eight years that preceded the peace, viz. from 1807 to 1814 inclusive, and although that period was one of public distress, "the quantity of gold and silver plate made, and retained for home use, within the kingdom" was—of gold plate 50,750 ounces, and of silver plate 8,290,157 ounces; whereas during the like period, from 1830 to 1837, inclusive, the quantities were only—of gold 48,432 ounces, and of silver 7,378,651 ounces; notwithstanding the marked increase of the population, and the manifest growth of general comfort. On reference to one of the tables given by Mr. Porter, it will be seen that, since 1837, as before, no period at all approaches the four years 1809 to 1812, inclusive, as regards the quantity of silver-plate made and retained for home use. As regards gold, an increase has taken place of late years, but it is trifling, and if allowance be made for the increase of the population, it becomes a positive falling off, at all events, on an average of several years.

The cause of the above results is, that in England

* Pages 535 and 536 of the edition of 1851.

luxury is assuming the same features as in France. It is less extravagant. People are becoming more economical. The wealthy even calculate more, and spend less for ostentation. True, as Mr. Porter remarks, we now find in the houses of workmen, artizans, and the other lower classes of society, utensils and articles made of the precious metals, which were not formerly to be seen there. Occasionally we meet with silver cups, and sometimes even with articles of silver gilt, and very generally with silver spoons. In the generality of taverns silver forks have replaced steel ones. *Still, on the whole, the total quantity of silver employed in the manufacture of articles of luxury is rather diminishing than increasing.* As for gold, its consumption has only begun to rise within the last few years. *No year subsequent to 1830 has ever reached the figure of 1826, which was 8,405 ounces.*

The objection may be started, that the declarations for duty made to Goldsmith's Hall do not include the total quantity of plate, &c., actually manufactured, and liable to duty; inasmuch as some gold and silver smiths evade the duty by selling articles which have never been stamped at the hall. It is probable that one-fourth of the duty is thus evaded. But this objection, which would have force had we asserted that the employment of gold and silver in the arts was limited to the quantities above specified, has no force against our line of

argument, which merely seeks to prove that *the increase in the manufacture of articles of silver and gold is very slow*. Evidently, the increase, if it existed, could not be concealed or diminished by the evasion of duty, for that affects all the years about equally. Nay, there is ground for presuming, that the evasion is less practised now than twenty or thirty years ago ; because, since then, both in France and England, the authorities have greatly improved their means of detection, whence we may infer, that the declarations for duty now made to Goldsmith's Hall are nearer the truth than was the case twenty, thirty, or forty years ago. We may go further, and question whether the *apparent* augmentation, as shown in the returns of duty paid, proves any *real* extension of the manufacture.

It may here interest the reader to examine two tables, the first of which exhibits the quantities of gold and silver annually worked up by the gold and silver smiths of France, from 1818 to 1850 ; and the second and third, the corresponding quantities upon which duty was paid in England since 1800.

TABLE I.—*Return of the Quantities of Gold and Silver work, tested and stamped annually in France, from the years 1818 to 1850, inclusive.**

Years.	Weight of articles in kilogrms.		Weight, in kilogrammes, of silver and silver-gilt wire and thread.	
	Gold.	Silver.		
1818	1,555	33,010	10,076	
1819	1,651	40,448	8,787	
1820	1,802	47,820	10,142	
1821	2,503	56,151	10,752	
1822	2,963	58,037	11,184	
1823	2,725	56,418	11,431	
1824	3,490	65,022	7,785	
1825	4,107	69,607	12,397	
1826	3,682	62,020	18,010	
1827	3,474	56,667	9,698	
1828	3,560	55,342	9,754	
1829	3,541	55,830	8,475	
1830	3,147	54,100	14,505	
			Silver-gilt.	Silver.
1831	2,183	35,867	6,781	6,491
1832	2,684	45,861	6,223	3,934
1833	3,572	61,124	5,812	5,132
1834	3,840	63,429	5,814	2,895
1835	3,841	65,169	5,751	2,229
1836	4,263	72,065	5,753	2,415
1837	4,233	67,238	5,533	2,306
1838	4,953	73,594	6,940	2,933
1839	5,120	72,192	6,056	2,502
1840	5,102	71,213	5,886	2,671
1841	5,547	75,964	8,675	2,999
1842	5,562	78,558	7,023	2,744
1843	5,541	78,287	7,708	2,665
1844	5,827	78,319	7,801	2,885
1845	5,684	80,179	6,609	3,002
1846	5,747	77,622	7,341	2,485
1847	5,035	69,028	6,162	2,570
1848	2,162	26,199	5,452	3,919
1849	4,018	44,910	6,487	2,747
1850	5,256	57,217	7,783	2,641

* The quantities here specified include what was manufactured for exportation, as well as what was retained for home use.

TABLE II.—Return of the Quantity of Gold and Silver Plate upon which Duty was paid, and for which Drawback was allowed, showing the quantity retained for home use in each year, from 5th January, 1800, to 5th January, 1850.

Year ending 5th Jan.	Duty Paid on		Drawback allowed on		Retained for Home Use.	
	Gold.	Silver.	Gold.	Silver.	Gold.	Silver.
	ozs.	ozs.	ozs.	ozs.	ozs.	ozs.
1801	5,251	902,966	77	142,705	5,174	700,261
1802	4,619	925,882	19	114,323	4,600	811,559
1803	5,137	986,381	66	126,878	5,071	850,503
1804	5,445	1,048,869	10	99,255	5,435	949,574
1805	4,854	902,788	21	114,829	4,833	787,959
1806	5,403	1,056,693	9	122,082	5,399	934,611
1807	5,372	1,084,525	43	121,608	5,329	962,917
1808	6,056	1,141,749	20	131,850	6,036	1,009,899
1809	6,189	1,159,412	18	90,516	6,171	1,068,896
1810	6,382	1,242,208	53	71,116	6,329	1,171,092
1811	7,435	1,341,024	102	86,896	7,333	1,254,128
1812	6,212	1,154,738	34	92,245	6,178	1,062,493
1813	5,891	990,223	34	50,334	5,857	939,889
1814	6,115	917,697	19	52,234	6,096	865,463
1815	6,779	974,245	29	55,948	6,750	918,297
1816	7,492	1,054,658	495	108,174	6,997	946,484
1817	7,002	910,002	886	85,142	6,166	824,860
1818	5,827	1,080,549	2,001	106,417	3,826	974,132
1819	5,881	1,293,586	2,507	98,777	3,374	1,194,709
1820	6,037	1,230,104	1,607	116,507	4,430	1,113,597
1821	6,651	1,081,310	3,735	114,224	2,916	967,086
1822	5,434	1,022,771	1,436	120,600	3,998	902,161
1823	6,997	1,027,722	1,370	64,783	5,627	962,939
1824	6,516	1,073,244	20	97,016	6,496	976,228
1825	7,662	1,258,658	33	70,482	7,624	1,188,176
1826	8,486	1,535,254	81	112,017	8,405	1,473,237
1827	7,108	1,247,880	—	71,493	7,108	1,176,887
1828	7,266	1,207,887	10	60,910	7,256	1,146,977
1829	7,106	1,361,332	2	86,157	7,104	1,275,175
1830	6,441	1,271,522	12	109,907	6,429	1,161,415
1831	5,716	1,076,976	6	84,444	5,710	992,532
1832	4,574	826,052	9	100,127	4,565	725,925
1833	5,189	914,096	15	79,659	5,174	834,437
1834	5,434	879,117	2	72,005	5,432	807,112
1835	6,116	1,050,232	—	102,251	6,116	947,981
1836	6,678	1,071,026	16	110,247	6,662	960,779
1837	7,966	1,272,920	—	164,064	7,966	1,108,856
1838	6,811	1,178,568	4	177,539	6,807	1,001,029
1839	6,784	1,195,483	21	161,453	6,763	1,034,025
1840	6,875	1,270,390	7	155,923	6,868	1,114,467
1841	6,992	1,209,266	7	179,904	6,985	1,029,362
1842	6,580	1,140,070	5	160,495	6,575	988,575
1843	6,305	1,026,046	4	171,574	6,301	854,472
1844	6,415	911,220	2	122,689	6,413	788,531
1845	7,242	1,025,412	8	170,987	7,234	854,425
1846	8,036	1,158,050	16	181,759	8,020	976,291
1847	8,335	1,188,736	18	167,513	8,317	1,021,223
1848	7,629	1,049,268	5	161,483	7,624	887,785
1849	6,810	756,388	—	109,136	6,810	647,252
1850	7,373	735,865	3	76,759	7,370	659,106

In England some articles are exempt from duty, which would be subject to it in France. For instance, watch-cases, of gold, and a larger number of articles in silver, which, after all, are of little intrinsic value.

TABLE III.—*Return of the AVERAGE Annual Quantities of Gold and Silver Plate, upon which Duty was paid in England, on each period of five years, between 1800 and 1850. (The troy ounce = 28,349 grammes.)*

Quinquennial Averages.	Gold.	Silver.
	OUNCES TROY.	OUNCES TROY.
From 1801 to 1805 inclusive	5,061	953,377
" 1806 " 1810 "	5,881	1,128,917
" 1811 " 1815 "	6,486	1,075,585
" 1816 " 1820 "	6,448	1,113,779
" 1821 " 1825 "	6,652	1,092,721
" 1826 " 1830 "	7,281	1,334,735
" 1831 " 1835 "	5,406	949,294
" 1836 " 1840 "	7,023	1,197,677
" 1841 " 1845 "	6,667	1,064,203
" 1846 " 1850 "	7,636	977,661
General Average for 50 Years	6,454	1,088,794

We now proceed to estimate roughly, but with sufficient accuracy for our purpose, the counter-vailing forces which tend to maintain gold at its present value. They consist:

1st. Of the contingency of extraordinary demands for gold, during some years to come, for the United States of America, Russia, Turkey, Australia, and several other countries; which demands, after what we have said, will be greatly exaggerated, if taken at 600,000,000 of kilogrammes.

2nd. Of the extra quantity of gold required for coinage, to keep pace with the rapid increase of population in Europe. This quantity is limited. In the

States which enjoy the blessings of western or Christian civilization, the population scarcely increases at the rate of one per cent. per annum, and it is highly improbable that this rate will reach one and a half per cent. Let us, however, adopt the latter figure. We shall then have to add annually to the quantity of gold required for coin, $1\frac{1}{2}$ per cent. for the extraordinary multiplication of the human race, say, as maximum, 20 millions of francs; which is ample, if we consider that the whole gold coinage of Europe and America is under 4 milliards (160 millions sterling): 20 millions of francs do not quite contain 6,000 kilogrammes of gold. In ten years the demand might possibly amount to 60,000 kilogrammes.

Thus, it will be seen, that the new outlets, even on the preceding strained computation, will not exceed, during the next ten years, the aggregate of 740,000 kilogrammes, viz.:

For additional coin in countries adopting gold for their currency	600,000 kil.
For the requirements of the arts, jewellery, &c.	80,000 „
For the increasing population	60,000 „
In all	<u>740,000 kil.</u>

Now, what is that amount in comparison with the immense mass of gold which is likely to be added, during the next ten years, to the stock already diffused through the civilized world?

We have seen that, on the lowest estimate, the annual increase of production, as compared with 1847, is 160,000 kilogrammes. In ten years, it would amount to 1,600,000 kilogrammes: if we deduct therefrom the above exaggerated estimate of 740,000 kilogrammes for new outlets, there would still remain a clear surplus of 860,000 kilogrammes, worth about 3 milliards of francs of our present gold coinage, (or 120 millions sterling.) This surplus, which might be limited for the first 3 or 4 years, on account of the metallic drain created by the United States and Russia, would swell rapidly thereafter, and would go on increasing after the first period of ten years had expired.

We may therefore anticipate the arrival on the general market, of a larger quantity of gold than can find a market at the present value of that metal. In other words, we may look for a fall.

In juxta-position, however, with the countervailing causes before enumerated, as likely to occasion an increased consumption of gold for the arts and circulation, we must cite other causes which may produce a contrary effect, and accelerate its depreciation. There is one at least which at once suggests itself, and which would be sensibly felt. We allude to the inducement which several countries might have for demonitizing gold, and restricting their coinage to silver. If they see the production of gold continue at the high rate which it has recently attained,

or even rise higher, that inducement would be very legitimate, for, by the very fact of its depreciation, gold loses the principal quality which led to its employment as coin: namely, its presumed steadiness of value. It need, therefore, excite no surprise, if, within a very few years, some of the most enlightened States of Europe and America should determine on demonetizing gold. Already, since 1848, we have seen two governments, Spain and Belgium, adopt measures which tend at least to limit the circulation of gold coin. A third, namely Holland, has altogether and very wisely demonetized that metal. It is highly probable that the example of these countries will be followed by others. The gold coin now in circulation in such countries, or at all events a very large proportion of it, would then be thrown upon the general market, and add to the fall simultaneously occasioned by the increased supplies from California and Australia.

One circumstance which would most strongly tend to retard for a time the depreciation of gold, in the general market, would undoubtedly be the persistence by France in her present unsound monetary system. In terms of the Law of the 7 Germinal, year XI., the French mint issued gold coins designated twenty franc pieces, and which are even stamped with the words "*twenty francs*," although the fundamental law of our monetary system defines the franc as $4\frac{1}{2}$ grammes of fine silver with $\frac{1}{2}$ gramme

of alloy. In other words, the quantity of fine gold contained in a 20-franc piece, viz. 5.806 grammes, is assumed as equivalent to 90 grammes of fine silver. The relation between these two *quantities*, viz. that of 1 to $15\frac{1}{2}$ is what existed between their *values*, in the French market, in the year XI.; but the relative value of gold and silver is necessarily shifting, the respective value of each of these metals being regulated almost entirely by circumstances exclusively affecting itself. Were, however, the government of France to persist in maintaining our monetary system on the footing of the law of the year XI., combined with that of the year III., the consequences are easy to foresee. The gold of California and Australia will find its way to our mints and pass into the circulation of France, where, in terms of the law, every gold piece of twenty francs is received as equivalent to 20 pieces of silver of 1 franc each, or 4 pieces of 5 francs each. The result of such a state of things would be to displace the silver by gold coin. Our silver coin would be exported by the enterprising Cambists and bullion dealers, who imported the cheaper metal. So long as such a market as France remains open for gold at the rate of $15\frac{1}{2}$ times its weight of silver, it is self-evident that gold will there maintain that relative value to the other metal; *but only till, and not beyond, the critical day when gold shall have replaced silver throughout the length and breadth of the land;*

or, in other words, when no silver coin will remain, except for change, or payments of less than twenty francs. When that point shall have been reached, France will cease to retard the depreciation of gold; but up to that point she will have served as a *parachute* for that metal.

It may be asked, in what way will the fall in the value of the precious metals manifest itself? We might reply, in general terms, that any commodity which is offered pretty continuously in quantities which exceed the demand, must from that very circumstance decline in value, and that its fall must continue if the cost of production be less than it previously was. We will, however, enter into some details on this point, or at least cite some examples of the mode in which the redundant production affects the value of the precious metals, and depresses it. When the Spanish colonists of Mexico and Peru had extracted from the mines a considerable quantity of gold and silver, they sent extensive orders to their mother country for such articles as suited their wants and tastes. These extensive orders enhanced the price of these articles at home, and there was no reaction from that higher range of prices, (except occasionally from transient fluctuations of the colonial markets) for the quantities of the precious metals shipped homewards by the colonists did not diminish; but on the contrary, went on increasing. Again, the inhabitants of the

Spanish peninsula, into whose possession the silver and gold passed on very profitable terms, exercised, in their turn, a like vivifying influence on trade in general. By the demand they thus created for articles of consumption, for raw produce destined to be worked up, and for labour, they raised the market price of these articles of consumption, of raw produce, and of money wages of all kinds. Now, to say that the price of a thing has risen, is tantamount to saying that the value of the precious metal which constitutes that price, has fallen. At the present hour, as regards the gold imported from California and Australia, the rationale is susceptible of still easier illustration. It is unquestionable that England receives by the vessels arriving from the above countries, a large portion of that gold, the bulk of which, we know for a fact, finds its way into the vaults of the Bank of England. Accordingly, the stock of bullion of that institution, which used formerly to range from 8 to 9 millions sterling, now exceeds 21 millions. With the view of turning this stock of bullion to account, that Bank has lowered its minimum rate of discount by degrees from 3 to $2\frac{1}{2}$, and even 2 per cent. The reduction of the rate of discount encourages industrial enterprise, and especially stimulates speculation, which again has a tendency to raise the price of goods. Hence a variety of articles have already experienced a rise which, in process of time, must gradually spread to

all others. Now, in a country where the standard is gold, what else is a general rise of prices but a fall in the value of gold in relation to commodities in general?

The aim of the Bank of England at present, and of the holders of the precious metals at all times, is to put into circulation the gold or silver in their coffers; but the coin which circulates in a country has natural limits, provided the metal or metals of which it is composed remain unchanged in value. The metallic circulation, practically, bears a certain proportion to the mass of business transacted. All beyond that is redundant, and the current of business throws it back into its natural reservoirs, which, in our days, are the public banks. A fall in the value of the precious metals is the only means by which the augmented mass of them can remain permanently in circulation. And this problem is now about to be solved, before our eyes. Suppose the mass of business transactions to be 20 milliards, and the coin required therefore to be only one-tenth of that sum, any greater quantity of coin you may put into circulation, will not possess, in relation to the mass of exchangeable commodities, a higher value than that now possessed by the 2 milliards of coin. In vain will you add one-half to the circulation and increase it from 2 to 3 milliards, that is to say, if the coin be silver, from 9 million kilogrammes, to $13\frac{1}{2}$ million kilogrammes; your $13\frac{1}{2}$ million kilo-

grammes will only command in commodities of every kind, the same quantity as was formerly exchanged for 9 million kilogrammes. Let us imagine, for example, that some morning, every housewife on her way to market at Paris, were to find in her purse, 3 instead of the 2 five franc pieces with which she had supplied herself for the morning's purchases, and that she proceeded to market resolved to expend the whole; that all of them acted in this respect alike, *and that they found at the market only the usual supply of vegetables and other provisions*; her 3 pieces would go no farther than the 2 would have gone; she would be obliged to pay for everything one half more than usual, and after having laid out the entire fifteen francs, she would return home with precisely the same quantity of provisions as if no addition had been made to her purse. This familiar illustration conveys a tolerably correct idea of the effect produced when fresh and copious supplies of the precious metals augment the quantity of coin in circulation.

We must, however, add, that concurrently with the above phenomenon, another is elicited by the discovery of rich mines and gold fields. A stimulus is thereby given to enterprize, industry, and trade, as we explained when speaking of the effects produced by the supplies drawn from the mines of America, after the discovery of that continent, and of the gold now flowing into the Bank of England from California

and Australia. Under such circumstances, the metallic currency tends to expand, without the value of the precious metal being affected by that expansion, *because it is the result of enlarged business transactions. The two phenomena present countervailing forces, but the latter, though it may delay, cannot neutralize the much stronger and permanent effects of the former phenomenon. The depreciation of the precious metals may be checked, in consequence of the enhanced demand counteracting, to some extent, the augmented supply, but the final result, supposing the production to prove permanent, is nevertheless certain. The value of the precious metals as compared with that of other commodities, must ultimately depend on the relative cost of production.*

They who hold the opinion that the mines and gold fields recently discovered are not likely to produce any marked impression on the value of gold in its relation to other commodities, and especially in its relation to silver, assert that the present extraordinary gold harvest will prove evanescent as a meteor. This assertion is a rash exaggeration of an unquestionable fact, namely, that "placers" and gold deposits being generally of an alluvial character, are sooner exhausted than silver, lead, and copper mines. It has frequently happened that gold mines which gave magnificent promises of richness, produced no perceptible influence on the bullion market. Colonel Acosta, in his history of the discovery of

New Grenada, adduces several examples of this kind. Many gold mines have become exhausted and been abandoned, after they had enriched those who worked them, but without producing any appreciable effect on the general market. We may attribute their abandonment to the fact, that even the richest alluvial soils contain only a limited quantity of metal, that they are seldom of great extent, and that they are almost invariably surrounded by land which is sterile, or nearly so. Let us select, in a gold-producing country, a tract measuring a square myriametre. That would be about the five-thousandth part of the superficies of France. Let us suppose the beds containing gold were 2 metres in depth, which would be considered a rich working: say 200 cubic metres of soil would yield 1 kilogramme of gold, which is a fair return. The beds worth working would be scattered over the space, and would not together form one-tenth of the total surface. Of the myriametre consequently, only one thousand hectares would be opened up. According to the preceding data, a hundred hectares would only yield 1 kilogramme of gold. The produce of a thousand hectares would only amount to 100,000 kilogrammes of metal. That sum might enrich a large number of individuals, or even a province, but it is insignificant when contrasted with the mass of metal already in existence, and the general wealth of the world. In the course of five or six years, presuming the miners to be laborious, the field which had at-

tracted the attention of the whole world would, in all probability, be entirely exhausted, without its returns having produced any perceptible effect on the value of the metal, or the quantity in circulation. On the other hand, let us see how the case stands with silver mines, such as they exist in America. A good vein, with promising indications, extending, not over a square myriametre, but merely for a myriametre in length, may be worked to an unlimited extent, and for an unlimited period.

Thus, there is undoubtedly ground for concluding that gold mines will oftentimes be of meteorlike duration, and that gold fields or placers will produce no effect on the general market, unless they be of immense extent. But the condition of a vast superficies appears to us to be completely fulfilled by the fields which are now being worked. There are an immense number of square myriametres of auiferous soil in California. There is also a vast tract of similar rich soil in the Mexican province of the Sonora, which adjoins California, and which is still all but virgin. It can no longer be doubted that in Australia the gold fields are of boundless extent; there is even ground for believing that they are much vaster than those of California. In Russia, the auriferous zone extends over an immense surface. There the gold veins are scattered at intervals, in a line which extends from Kamskatka and the Oudskoi mountains, the feet of which are bathed by the

waters of the Pacific Ocean, to the latitude of Perm, that is to say, to the western extremity of the Oural Chain, and that immense auriferous zone is 900 kilometres wide. To adopt the words of M. de Humboldt, the presence of gold nearly continuously throughout that immense tract is one of the most striking phenomena which can be indicated on the globe.

Further, independently of the gold fields and alluvial deposits, we may be allowed to anticipate that before long, the process of quartz crushing will yield a large quantity of gold. Until now, in every country, human industry has almost exclusively been directed to the alluvial deposits of gold, produced by the continual filtration of water through the quartz in which the metal was originally embedded. But in these days of mechanical skill and ingenuity, enterprising engineers have determined to extract the golden treasure from the rocks of California, by crushing the quartz by means of powerful stamping machinery. This has been successfully attempted in numerous cases, and upon a large scale. M. Leon Faucher, who has all along expressed himself very strongly against the opinion that gold must fall in value, has stated that these trials have ended, as they were sure to do, in failure, and he has presented us with some calculations on the subject, which he considers quite conclusive. Without going so far as to assert that quartz crushing in California will be

crowned with success, I must say, that I regard the statement of M. Leon Faucher as at least bold and premature. Why despair so quickly of the success of that application of science? Can M. Leon Faucher rely on the accuracy of the information which has been furnished him? He does not favor us with his authorities, and consequently we cannot analyze the summary statements contained in his paper. But in the number of the "*Revue des Deux Mondes*," for 1st September, 1852, we find information on this point, from the pen of an ocular witness* who has recently returned from California, and who passed two years there, in a post where he had the means of ascertaining what was passing at the mines; and who, moreover, on account of his acquaintance with mechanics and mining, is worthy of a hearing. That witness, far from representing quartz mining to be a failure, expresses himself as if he believed it would succeed. We do not then go an unsafe length when we limit our averment to this, viz.: 1st. That from quartz crushing on a large scale, there is strong probability of a permanent supplemental production of gold. 2nd. That the vast production, which the world has witnessed since 1848, *instead of being an ephemeral accident, will prove a permanent fact.*

In our preceding observations in reference to the likelihood of a fall in the value of gold as compared

* M. Martial Chevalier, who then filled the post of Chancellor to the French Consulate at San Francisco.

with that of silver, we have assumed that the value of silver itself will not fall, or not fall so soon, or to a like extent. On this subject what shall we say? Is not silver, too, likely to undergo considerable depreciation through increased supplies?

If we examine this question, without reference to the period when the depreciation will take place, it must necessarily be answered in the affirmative. Certainly there is every reason for anticipating that silver will one day decline considerably in value. For this opinion we can offer two well-founded reasons. In the first place, the silver mines as yet unopened in America are almost unlimited in number, and it were very surprising, if amongst them all, there were not one or more destined to furnish a second edition of Potosi and the veins of Guanaxuato. In the second place, the mode in which the principal silver mines of Mexico and Peru have hitherto been worked, is susceptible of great amelioration. Were modern improvements in mining and machinery, and recent scientific processes, introduced at these mines, a very important diminution would be effected in the cost of production.

Let us establish these two points, and begin with our statement as to the vast number of mines.

On this point all writers are agreed. M. de Humboldt expresses himself in the following very decided terms: "In general," says he,* "the abundance of silver

* *La Nouvelle Espagne*, vol. III, pp. 342—43 of the edition 1824.

is such, in the chain of the Andes, that when we consider the number of veins which have either remained unopened, or been only superficially worked, we feel inclined to believe that Europeans have hardly begun to draw upon the inexhaustible stock of mineral riches contained in the new world." * * * "Europe would be inundated with the precious metals, if all the new appliances and improvements in the mining art were brought to bear upon the mineral treasures of Bolanos, Batopilas, Sombrerete, Rosario, Pachuca, Moran, Zultepec, Chihuahua, and many others, which enjoy an established and well merited celebrity."

A traveller who at a more recent date resided many years in Mexico, and who only returned thence twelve years since, M. Dupont, who is a man of rare intelligence, a keen observer, and thoroughly conversant with mining in all its branches, bears the most explicit testimony to the accuracy of M. de Humboldt's observations. He says,* "*Mica-slate, trachyte, basalt, chlorite, diorite*, and occasionally calcareous masses of ancient formation, and more rarely porphyry, are, in many places, crossed by veins of quartz, which frequently contain the sulphurets of different metals. Whenever this feature presents itself, sulphuret of silver is rarely absent. These formations, which are very rare, at least to

* "On the production of the precious metals, in Mexico," page 380.

all outward appearance, in the neighbourhood of the city of Mexico, disclose themselves through the masses of porphyry as we advance towards the North. At almost every spot where these indications are met with, mining is being prosecuted on a greater or lesser scale. In crossing the principal chain towards the gulf of California, it is no longer isolated points, but the entire western slope of the Sonora Cordillera which is composed of these metallic rocks, intersected by the same veins of quartz, and extending over an immense expanse. Need I add that the lodes worked during the last three centuries, are as nothing compared with those unopened."

"After having visited only Tasco, Real del Monte and Guanaxuato, M. de Humboldt said, forty years ago, that the mines of New Spain contained silver enough to *deluge* the world. What would he have said had he carried his researches further northwards."

Even independently of the unopened veins, those which have been worked still contain boundless mineral riches, as is shown in the following remarks of M. Dupont*: "But, without seeking new districts, the miner may, in the old districts, continue the workings with far greater success than is commonly supposed. Zacatecas is an example of this. The mines of that name have been worked continuously since 1548, and have yielded silver, in

*"On the production of the precious metals, in Mexico," page 378.

more or less abundance, according as fortune favoured the labours of the miners. The long established reputation of Zacatecas was in jeopardy, when a French miner, of the name of De Laborde, discovered the lode of *Veta-Grande*, from which, (although it was considered to be exhausted, towards the close of the last century), there was extracted between the years 1827 and 1839 about 150 million francs' worth of silver! A still more recent example presents itself in the grants of *San Clementi* and *San Nicholas*, which are at the present moment the richest spots in Zacatecas. Ten years ago, no one surmised the existence of such valuable lodes, though the spot where they have been discovered is contiguous to the grants of *Malanoche* and *Rondanera*, which, within the last forty years, have made the fortunes of several families. Finally, the *Fresnillo* mine, which is at present yielding ten million francs' worth of silver per annum, was visited in 1827, by Mr. Ward, the traveller; who, in his work on Mexico, talks of it as an abandoned property, interesting on account of its past prosperity, but on which no hopes could be founded for the future."

So much for the abundance of veins. It is not less easy to demonstrate that a great diminution may be effected in the cost of extracting the silver. Mining operations in Mexico and Peru are still subject to frightful outlay for the transport of pyrite of calcined copper, of fuel, of stores and provisions

required for the miners, and even of the forage for the cattle, as these countries are literally without roads, and everything has there to be transported on the backs of mules. We do not indulge a chimerical hope in presuming that Mexico and Peru, will, some day, possess roads like other civilized countries. The machinery hitherto employed at the mines has been of the rudest kind, betokening the very infancy of the arts. We may reasonably expect that modern engineering skill, with all its improved appliances, will, one day, penetrate thither. Does it not already flourish in the United States? Iron and steel, large quantities of which are consumed in mining, cost the principal mines of the New World, very high prices, owing to the defective means of transport and the high customs duties on these indispensable articles, on their importation. Their gunpowder, too, is inferior in quality, while the price of it is exorbitant. The chemical processes and treatment of the minerals are still more defective than the machinery. Cold amalgamation, by which mode the great bulk of the silver is to this day extracted, was at the time of its invention, a stroke of genius, and the modest miner, Medina, to whom we are indebted for it, deserves monuments at the hands of the Spaniards of the New World. But now-a-days, greatly improved processes have been discovered, whereby in most cases, more metal is extracted, with a less expenditure of mercury.

There is, therefore, a wide field for improvement in the working of the silver mines of America. European engineers, well acquainted with mining and the treatment of metals, and possessing ample capital and credit, might even now secure splendid returns. If, as M. de Humboldt wrote, fifty years ago, the country only possessed an **INDUSTRIOUS POPULATION**, a revolution would forthwith take place in silver mining, and a fall in the price of silver would be then inevitable.

But the "*industrious population*" in question does not yet exist. Not that I seek to disparage the qualifications of the Mexican race. I believe that there are in Mexico (I allude particularly to that country because it contains the most important mines, and produces far more silver than all the others), I say that I believe there are in Mexico, as in other parts of Spanish America, many intelligent men; but nevertheless society is there in a state of languor and confusion. Mexico is the portion of the New World which has most severely suffered by revolutions. That is quite enough to cripple and impede industrial enterprize. No one can pretend to foretell, with any certainty, the period when that country, once flourishing, will be restored to order and prosperity; or whether such a revival will ever occur, otherwise than through its conquest by the Northern States. So long as the political condition of Mexico remains as at present, mining

enterprize in that country will advance but slowly; and if progress be made, it must be accomplished in the teeth of many and formidable difficulties.

Local and partial reforms may perhaps be introduced. Some have already been adopted. The presence of a number of English, German, and French engineers has had a beneficial effect. M. Dupont, in his excellent work "*On the production of the precious metals in Mexico*," mentions, on this point, some interesting facts, and names, some foreigners and Mexicans also, to whom the country owes a real debt of gratitude for the impulse they have given to business. Still that falls far short of the general movement requisite to restore life and activity to a languishing branch of industry, and to bring the most recent scientific improvements within its reach. Were the country differently governed, such a movement would soon occur.

M. Dupont states with clearness, and at length, the obstacles which, in the present state of things, prevent silver mining in Mexico from undergoing that salutary revolution which was expected to result from her independence. The construction of roads, and other useful works, are quite out of the question in the present deplorable state of the public finances. In the absence of a powerful government inspiring confidence and respect, it is vain to think of overcoming the prejudices and evil habits of the population. The inventors of new

processes cannot reckon on the protection of their patent rights by the tribunals. Nor can they rely on the co-operation of the miners, as M. Dupont has shown in detail. The support of the capitalist is wanting, too, for the rate of interest is now treble or quadruple what it was prior to the independence of Mexico, and it does not appear likely to fall.

It seems then, as if the sacred fire of progress is not destined to quicken and develop the mining operations of Mexico, until that unfortunate country shall have been absorbed by the encroaching republic which has already annexed Texas, New Mexico, and California, formerly all provinces of Mexico. That will happen, and possibly before long. An irresistible influence seems to force Mexico to that fate. But, after all, the absorption of Mexico by the United States, and the subjection of that country to these new masters, exist only in the uncertain vista of futurity. The unprecedented production of gold in California, Australia, and other places, is, on the contrary, a great fact: a revolution in full career. Consequently we are warranted in maintaining that the depreciation of gold is imminent, whereas that of silver can only occur at some distant date, which it is now impossible to fix with any degree of precision.

The depreciation of gold, must, in England, where it is the sole standard of value, injuriously affect the recipients of annuities, and of all fixed or deferred

payments, and benefit, *pro tanto*, those who have undertaken to provide for them. Let us suppose, for the sake of illustration, that gold should fall to half its present value, in consequence of the influx of the Californian and Australian supplies. It is a supposition which may probably be realized, ere many years. In that case, the interest of the national debt, which amounts to about 28 millions sterling, per annum, would not then press more upon the tax-paying public, than half the amount, or 14 millions, do at present. The difference of 14 millions is nearly equal to the entire annual expenditure of Great Britain for her land and sea forces. Such an alleviation of the burdens of taxation would be an immense boon to the community at large, at the expense, however, of the fund-holder. Yet, the latter could not, with justice, complain that the laws of equity were violated by such treatment of him. The public creditor would merely be incurring the clear and simple application of the law, such as it was passed after grave and conscientious deliberation. By law, as in equity, the Government is bound to do nothing more than to provide every year 28 millions sterling: or in other terms, 28 million times 113 grains troy, of fine gold, which is equal to 549,314 pounds troy; to be divided, *pro rata*, among the holders of stock. Had the value of gold risen to such an extent, that the quarter of wheat, which is usually worth 50s., could command, on an average of

15 or 20 years, only 25s. or that a labouring man could only earn on an average 2s. a-day, instead of 4s., the Chancellor of the Exchequer would nevertheless have been bound to provide annually, the stipulated 549,314 pounds troy, of fine gold, for *pro rata* distribution, among the public creditors. The two contracting parties, it is plain, ran converse risks; the State, that of an enhancement of the value of gold, the fund-holders that of its depreciation. If ever our conjecture be realized, the wheel of fortune will have favored the British treasury. The other party must submit, and will have no right to complain.

Since gold coin is also in circulation in France, it may be asked, what is there to prevent the French, like the English government, from turning the circumstance to account, by paying the interest of the public debt in gold, when that metal becomes depreciated as compared with silver ?

Let us pause to examine this question; it is one involving the principles of good faith.

When the depreciation of gold shall be sensibly felt, there may in sooth be temptation for a Minister of Finance, amid the embarrassments of the Treasury and the murmurs of the tax-payers, to exclaim, "Here is a good opportunity for alleviating the burdens of the people; let us henceforth pay the *rentiers* their dividends in gold; let us tender to them as 20 francs, the coins which bear that super-

scription in terms of the law of the year XI, although the quantity of gold which they contain, viz., 5 grammes and 806 milligrammes, are only worth (and can be bought in the market for) 15 francs, or 672 grammes of silver; and let us continue to pay in that gold coin, even should it fall to 10 francs." But such a proceeding would be grossly immoral and unjust. It would be an unfair and forced interpretation of a phrase casually introduced into our legislation; the conversion of a flaw into a permanent and sweeping provision. Why did the Legislature of the year XI decree the coinage of gold pieces to pass as 20 francs, and to contain 5 grammes, 806 milligrammes of metal? Because that quantity of fine gold was then worth in the market exactly 20 francs; or, I should rather say, 90 grammes of fine silver. Had that quantity of gold been worth only 15 francs, would it have been issued for 20 francs? Evidently it would not. If, during the discussion of the law, the government had been asked to explain what course it would pursue, in the event of gold, at some distant date, becoming depreciated or enhanced in value as compared to silver, the government would have replied, that in the supposed contingency, a fresh coinage of gold would be resorted to, in order that the quantity of that metal contained in the twenty-franc pieces might be proportionally increased or diminished; and that a law would determine the rate

at which the pieces of twenty francs, previously in circulation, should be a legal tender; keeping in view the alteration which had taken place in the value of gold as compared with silver. We cannot, then, admit that the government of France would be justified, five, ten, or twenty years hence, when the value of gold shall have fallen, in taking advantage of the depreciation to the detriment of its creditors, and in forcing them to receive for 20 francs, gold pieces containing only 29 centigrammes of fine gold per franc.

Were silver to fall in value, the French Government would be fully warranted in paying the rentiers their dividends, as heretofore, in silver. The bargain with them was made in that metal. The law has declared, once for all, that $4\frac{1}{2}$ grammes of fine silver shall pass as a franc; and all are equally exposed to the risk of fluctuations, be they serious or trifling, in the value of the coin. Whoever should object to a payment made on that footing, would be nonsuited both in law and equity. Were a heavy fall to take place in the value of silver, the budget, which is made out in that coin, would exhibit a much larger total, without proving more burdensome to the public. Supposing the fall were to the extent of 75 per cent. or three-fourths, the taxpayers could contribute to the Exchequer 4 francs or 18 grammes of fine silver, with as little difficulty as they now do 1 franc or $4\frac{1}{2}$ grammes of fine silver. The payments to con-

tractors, public officers, and employés, would rise in proportion. A person now in the receipt of 10 grammes of silver for certain services, would, under these altered circumstances, receive 40, in terms of a new contract to that effect. But all anterior contracts and current engagements between private individuals, or between the state and private individuals, whether Frenchmen or foreigners, would retain their full force and have to be performed, franc for franc, or in other words, gramme for gramme.

If the gold fields of California and Australia should prove as rich and extensive as they are now represented to be, their effect, at no very distant day, upon the British Treasury, will be much the same as if the evil genies of its creditors had abstracted from their strongboxes a large portion of their bonds, perhaps one-half, without the sufferers having any right to utter a complaint. The French Treasury, on the other hand, can derive no such benefit from the recent gold discoveries, except by perpetrating a monstrous act of spoliation. But if silver mines of remarkable richness should be discovered in California* and elsewhere, or if through the adoption of new

* France possesses in her own territory very valuable silver mines. The richest and most extensive are those of Pontgibaud near Clermont, in Auvergne. A company has recently been formed in London, under the auspices of Mr. Alderman Thompson and Mr. Charles Morrison, for working these mines on an extended scale, under the direction of Messrs. John Taylor and Sons. The production is likely to be very large.

processes and improved machinery, the cost of production at the silver mines of Mexico, Peru, and Chili, should be considerably diminished, the French treasury will then honestly reap a benefit similar to that which the English Treasury is about to derive from the golden harvest on the shores of the Pacific.

Under the laws which now regulate the coinage of France, and most other countries, a slight further depreciation of gold would lead to the displacement by it of the silver coin. At present the two metals circulate concurrently, and are both legal tenders. With the exception of England and Holland, that double tender obtains almost universally. The silver so withdrawn from circulation, would press on the market and compete with the silver arriving from the mines, just as sensibly as any unusual supply, or the discovery of some immense stock of that metal. It is not permitted to doubt that a fall would ensue. Its effects, however, would be only evanescent. The mass of silver so displaced, being a fixed quantity, incapable of augmentation, would in that respect differ from the supplemental production of gold, which is now going on, and moreover, promises to continue on an augmented scale for a great number of years. The silver withdrawn, as we have supposed, from circulation, would operate unfavourably on the silver mines now in working; and the diminution in their production would, after a certain lapse of time, equal the quantity withdrawn from circulation.

The effects of such a displacement as we have supposed, would check, and might even for a time entirely neutralize, that alteration in the relative value of gold and silver, which the recent alteration in the relative cost of production of these two metals is clearly bringing about. But after a certain lapse of time, if the diminution in the cost of production of gold were not attended by a like diminution in that of silver, the increased supply of the former would infallibly produce its natural effect. In the long run it would lead to a depreciation of gold, not only in respect to silver, but in respect to every kind of commodity.

When the metal from which the standard coin of any country is made, becomes uncertain in its value in relation to the other productions of industry, the expedient is sometimes employed of stipulating that payments shall be made otherwise than in money. In such a state of things, prudence suggests the propriety of adopting, where it can be done with facility, a non-metallic mode of payment, by substituting for coin some other article which promises to be less fluctuating in value.

As we stated on the outset, one of the principal causes which led to the selection of gold and silver as media of exchange, was the comparative steadiness observable in their values. But whenever a discovery like that of the mines of America in the sixteenth century, deranges the value of the precious

metals, so long as that derangement lasts, and while these metals are dropping from the higher, and for a long time almost fixed level of value, to the lower level, at which they will settle for an indefinite period: during that period of transition, we say, they lose the all-important quality of steadiness of value; and people naturally endeavour to substitute, where circumstances will admit of their doing so, some other commodity, which is deemed more steady, or rather less subject to fluctuation. Wheat, at once presents itself as a substitute deserving of notice. Wheat, however, cannot serve the purposes of coin. As we have explained, it is not sufficiently portable, it deteriorates in quality; it is not a homogeneous article, intrinsically the same wherever produced, like gold, a bar of which as fashioned by a refiner in London, is precisely similar to another bar fashioned by another refiner at our antipodes; lastly, wheat often experiences, in the lapse of a twelvemonth, severe fluctuations in its value as compared with other commodities. It doubles, and sometimes trebles, in price, or it suffers an equally extensive decline; witness the difference between the prices of wheat at the beginning and at the end of 1846, and the fall between 1847 and 1848! Nevertheless, upon an average of several years, it is certainly one of the commodities which vary least in value, as compared with the other productions of human industry. If we examine the price of wheat during a series of

centuries, it almost seems to possess fixity of value. Had a person who lived in the days of Augustus, and enjoyed an annual income of 1,000 quarters of wheat, resolved, and been able, to transmit to his descendants, from those days till now, that annual income in wheat, he would assuredly have secured for his heirs of the eighth, fifteenth, and nineteenth century, a degree of comfort more akin to what he himself enjoyed, than would have resulted from the annual payment to them of a fixed quantity of gold or silver.

Upon the above principle, and in anticipation of a great depreciation of gold, it would at present be practicable, legal, and wise, for any landed proprietor about to grant a lease for several lives, to stipulate that the rent shall be payable in a certain quantity of * wheat, instead of pounds sterling. In like manner, a person desirous of securing a certain annual income to his children, or to endow a college, or charitable institution, would display prudence (on the hypothesis we have adopted) in stipulating for their enjoyment of a certain number of quarters of wheat, instead of coin. It was on these grounds, that, shortly after the discovery of America, England, whose coinage was then almost entirely of silver, passed a very wise law, to the effect that in making

* Would it not be better to stipulate for the payment *in money*, of the market value of a certain quantity of corn, to be computed annually from the grain averages? The stipends of clergymen in Scotland are computed in that manner. D. F. C.

any new leases “for life, lives, or years,” the authorities of the Universities of Oxford and Cambridge, and of the Colleges of Winchester and Eton, should stipulate “that the one third part at the least of the old rent should be reserved and paid in corn” of the best quality.

Men of eminence, such as the Chancellor Burleigh and Mr. Secretary Smith, were the promoters of that measure of forethought. Enlightened by the experience of surrounding nations, they perceived that silver represented more imperfectly than wheat did a fixed amount of income, during a long series of years. The act* was passed in 1576, when the monetary derangement occasioned by the Potosi mines was at its height.

The measures of precaution just alluded to are only applicable in special circumstances. There are, however, other precautions, within the reach of every man who is anxious to avoid, or lessen at least, the risk of finding his income and comforts curtailed by the depreciation of gold. As a general rule, whenever the value of the metal which forms the standard coin is falling, he who lays out money for a long term of years, ought to avoid what are termed *cash*, and select *real* investments. The public funds are of the

* The Act referred to by Mons. Chevalier is the XVIII Elizabeth, chap. VI., and merits the attention of solicitors who may have to prepare new mortgage deeds. D. F. C.

former category; so also are mortgage bonds, Bank stock, and the loans raised by railways, canals, and other public companies. True, £100 invested in consols will still be worth that amount, provided the political and other causes which influence the price of the funds have produced no fluctuation.

But if gold becomes depreciated, £100 will command a smaller quantity of land, real property, and commodities in general; for precisely in proportion as that metal declines, other articles advance in price. The rise of the latter is correlative with the fall of the former, or rather they are two features of the same fact.

The *shares in railways, canals, bridges, docks, and other similar public undertakings, rank in the category of *real* property; were the currency to fall fifty per cent., the market price of railway shares would double itself: on the supposition that no change for better or worse occurred to the lines; that the traffic remained the same; *and the Companies had the power of proportionally raising, (viz. doubling) their tariffs.*

In every case, where a railway or other public company already exacts the maximum rate of charge authorized by Act of Parliament, (unless Parliament should raise the tariff) the value of the shares must decline; inasmuch as the traffic receipts

* *Railway debentures*, on the contrary, being cash securities, must deteriorate as gold becomes depreciated. D. F. C.

will remain stationary, while the *working expenses will be doubled. It may even come to pass on certain lines that the receipts will not cover the cost of working. Without fresh powers from Parliament, the shares would become worthless, and the lines would either be abandoned or ceded to the state.

The shares of the Bank of France, and the stock of the Bank of England, are essentially cash investments; but as the dividends of these establishments depend on the mass of business transacted by them, and as a depreciation of the currency to the extent of 50 per cent. would double the extent of their transactions, and particularly their discounts, the principal items of revenue would rise to twice what they now are. Every one, indeed, must perceive, that in the event of gold or silver falling to one half its present value, the sale of a cargo of cotton or any other commodity, would put in circulation bills of exchange for double the amount it would now; and if the Bank discounted twice as much paper, and at the same rate of interest, its receipts from that source would be doubled†. It follows then, that

* Our English railways will feel severely any considerable rise in wages. In France, on the contrary, where the currency is silver, no augmentation of the working expenses is to be apprehended. D. F. C.

† If the Bank's capital be fully employed, how is the Bank to double its discount business without calling up fresh capital? D. F. C.

although Bank stock is a cash investment, the holder of it will not* suffer through the depreciation of the precious metals.

There is, however, another side of the question which must not be lost sight of. The Bank's capital—divided into a certain number of shares, and consisting principally of specie and securities payable in specie, is the security for the confidence placed in it by the public. If the present capital is only just sufficient to afford that security, it follows that in the event of specie falling 50 per cent in value, the capital ought, for the safety of the public, to be doubled: in other words, it would be necessary to issue new shares, and admit additional shareholders, who would participate in the profits of the Bank. According to our hypothesis, however, these profits, though expressed in twice as large a figure, would only be equal in value to the former profits. The shareholders would thus suffer to a serious extent through the cash nature of the investment.

We may, however, observe, there are good grounds for maintaining that even in the event of gold or silver falling 50 per cent., there would be *no necessity for augmenting the capital either of the Bank of France or of the Bank of England. The credit justly enjoyed by these two colossal establishments is so great, that we feel assured they could fully answer all the purposes of their creation, even were their respective capitals reduced one half.

* Here I must join issue with Mons. Chevalier. D. F. C.

COMMENTS by Mr. Forbes Campbell, on certain passages in Monsieur Leon Faucher's "*Remarks on the Production of the Precious Metals, and the Demonetization of Gold,*" &c.

MONS. LEON FAUCHER'S TEXT.

"We do not think we shall be exaggerating in supposing that the production" of silver "will have reached 250,000,000 francs in 1852, and that it will consequently have exceeded 1,100,000 kilogrammes. At this rate the accumulated value of the precious metals produced in 1852 will have reached the figure of 850,000,000 francs, of which silver will represent the proportion of about 30 per cent. *the weight of gold will then be in the proportion of 1 to $6\frac{3}{10}$ to silver.*" (See page 80.)

COMMENTS.

Contrast these statements with Mons. Chevalier's, at page 32.

Baron de Humboldt and Mons^r. Chevalier estimate the total present annual production of *silver* at 975,000 kilogrammes, or 216,500,000 fr. (say £1,340,000) less than Mons^r. Faucher's figure; while they estimate the total production of *gold* for 1855 at 1,336,000,000 francs, or more than double Mons^r. Faucher's estimate of 600,000,000 francs. The difference amounts to nearly 29½ millions sterling!

TEXT.

“Another cause will necessarily act on the production of silver, and that is, the very abundance of gold. *When silver is found to be more in demand*, fresh activity will ensue, both in re-opening old galleries, which have been closed as not sufficiently remunerative, and in pushing on the work in those actually in operation. If the mines feeding the present supply are becoming exhausted, and other sources are not forthcoming, *in a few years silver will reach the price of gold, or the value of gold will descend to that of silver*; but as the limits of silver working are but the price of labour, the power of machinery, and the application of science.” (and capital?) “so, every increase in the quantity of gold, which is not caused by accidental circumstances, or by an extraordinary demand, must produce a corresponding increase in the production of silver.” (See page 84.)

“The extraordinary abundance of gold, then, *does not appear to be of permanent duration*. It

COMMENTS.

The value or purchasing power of silver is not enhanced by the depreciation of gold. Silver would command more *gold*, but not a larger quantity of commodities in general.

The working or the abandonment of these silver mines will, I apprehend, depend entirely on the cost of extraction, and on the value of the produce extracted, *quite irrespective of the supply and value of gold*.

Recent accounts and shipments from Australia and California, testify the very reverse.

TEXT.

does not appear to be, as far as we can now form any opinion, a reign of one metal, which is likely to take the place of some other; nevertheless, *there will most infallibly be a very marked fall of gold in comparison with silver, unless met by a most extraordinary activity in working the silver mines.*" (See page 88.)

"*The more wealth increases in the colony,*" (Australia) "*the more gold will be employed both for circulation and for luxuries. The producing country will be most certainly, par excellence, the country of consumption. Europe contains 200,000,000 inhabitants, of whom not one half are adequately supplied with metallic money. It would require, certainly, an addition of many milliards of francs to the quantity of the present metallic circulation, to put many of these countries in an equally favorable position in this respect with France, &c.*" (See page 90.)

"In many countries, now, gold and silver are replaced by the use of paper money, often discredited in its own, and in

COMMENTS.

The establishment of numerous banks in Australia, and the general employment there of bank notes, will greatly restrict the metallic circulation, and defeat the anticipations of Mons. Faucher. The experience of California is also at variance with his conjecture.

France is over-burdened with coin. Her trade is far inferior to that of England, and yet she possesses a much larger stock of the precious metals. Of the two "*positions*" is not England's unquestionably the more "*favorable*."?

Every Paris banker remembers, that in the spring of 1848, English Bank Post Bills were the only means of remittance

TEXT.

all cases valueless out of its own country." (See page 91.)

"It is supposed that the use of bank-notes of 200 and 100 francs" (since 1848), "*has economized the use of several hundreds of millions of the precious metals.*" (See page 92.)

"The combined washings of the Altai, California, and Australia, during a quarter of a century, would be required to produce a sum equal to the annual revenue of England alone. This unexpected harvest of the precious metals is but an addition to a common fund of wealth; *it cannot produce a deep or a durable impression on the almost incalculable mass of wealth already existing in the world.*" (See page 93.)

"The use of silver and gold plate, of gold work and jewellery, is increasing every day, as a distinguishing mark of the rise of the middle classes. (See page 94.)

"It would appear as if industry, in its contact with gold and silver must have *volatilized*

COMMENTS.

left him, for his continental transactions.

True: but this admission is sadly at variance with Mons^r. Faucher's statements and reasoning in his two preceding pages.

What of that?

It can and certainly will produce "a deep and durable impression" on the value of that *limited* quantity of gold and silver which has hitherto regulated the price of every article comprized in "the incalculable mass of wealth existing in the world," and which *limited* quantity has served adequately all the purposes of circulation.

The increase is very slight, if indeed there be any at all. Consult the tables at pages 50 and 51.

If the government of France do not demonetize gold, or stop its further coinage, all the five-

TEXT.

it. France converted into coin a large amount of the precious metals; but when coined, it did not remain there. *Exportation* appears constantly to produce the effect of *banishing it* from the country." (See page 95.)

"The Bank of France, whose metallic reserve in 1851 included an amount of 100,000,000 francs of gold, now does not hold above 15,000,000 to 20,000,000." (See page 96.)

"Then comes the question as to the demonetization of gold; doubtless no point is of greater importance for a standard of circulation than a *fixed* value" (See page 97.)

"The influx of the precious metals has been, in a certain sense, a *providential* occurrence during the revolutionary state of Europe. *Credit* had either disappeared, or had at least become *stagnant*. Everywhere, amidst the tempest of the times, both past and prospective, business had been suspended or carried on only for ready money.

COMMENTS.

franc pieces in that country will, ere long, be "*volatilized*."

Because the Bank of France prefers to pay in gold and keep its silver.

Where is a *fixed* value to be found? Produce it, and out of it I will undertake to extract the philosopher's stone.

"*Providence*" ought to present its compliments to Mons^r. Leon Faucher, and thank him for preventing its "*credit*" becoming "*stagnant*." Mons^r. Faucher here emulates the divine who devoutly blessed Providence for having placed large rivers near great cities.

TEXT.

Affairs had assumed an aspect of a primitive state of exchange. An increase of *metallic circulation* might again restore confidence, and calm agitation." (See pages 101 and 102.)

COMMENTS.

Were and are not common sense and good conduct more wanted in France than additional "*metallic circulation*?"

APPENDIX.

From the "Times" June 25th, 1852.

MONEY-MARKET AND CITY INTELLIGENCE.

Thursday Evening.

The considerations which, three years ago, were almost derided as to the probable effects of the increased supply of gold, are now assuming a preponderance over all other subjects. The anxious pause of curiosity is latent, but it is nevertheless felt by every one, and it is easy to understand why it has not hitherto been more decidedly expressed. The landowners do not care to avow the full extent of their hopes, and to stimulate a cry from the annuitant class for preventive meddling. That class, on the other hand, together with the much larger body who dislike everything that upsets routine and necessitates thought, endeavour to persuade themselves into indifference. Their original disbelief having been forcibly overcome, they seek new refuge in the conclusion that fresh uses for the precious metals will prevent any alteration of value. The remaining class, consisting of ordinary men of business, who are not affected by the bias of either the landlords or the annuitants, hesitate to discuss a subject which they have no time to work out, and on which, nevertheless, they are expected to be perfectly clear. Under these circumstances, although it may involve a repetition of former statements, it will be useful to review once more the general bearings of the whole question.

To arrive at an exact solution it would be necessary to ascertain the amount of gold and silver in the world, and the present annual consumption for coinage and the arts. This is impossible, and conjectural quantities must consequently be taken. The total of coin has been guessed at £400,000,000. Of this £150,000,000 may be assumed to be gold, and £250,000,000 silver. The annual consumption of gold is believed to be under £6,000,000.

Starting with these figures, if the demand for gold were likely to continue limited to its ordinary amount, an estimate of the effect of the supplies now pouring upon us could easily be formed. These supplies, within the few years since the discovery of California, have probably, in the aggregate, left us an excess of £30,000,000 over what has hitherto been found sufficient for current wants, and to maintain an equilibrium in the general relations of property. The increase, therefore, has been equal to 20 per cent. on the whole sum in existence; in other words, the measure of value would appear to have been extended one-fifth (just as if a 25-inch measure were extended to 30 inches), and hence the effect to be looked for is obvious. Where gold is the standard, the price of every article adjusts itself to the relation it bears to that metal. If sovereigns were twice as numerous, a man would demand two where he now takes one. An increase of 20 per cent. in the supply should, therefore, have been followed by a proportionate advance in the nominal value of all things.

But signs are wanting of any such general advance. It is necessary, therefore, to enquire—first, whether any absolute test is available by which the change can be shown to have taken place in some one instance, although it may have been counteracted in others; and next, if this be impossible, whether the apparent anomaly can be explained on different grounds.

The most direct test would be sought in the price of silver, that article, next to gold, having hitherto been the least liable to variation. But it was long ago pointed out that in those countries where gold and silver constituted equally a legal tender, one

metal, as it became more abundant, would displace the other, and that the surplus of gold would thus be reduced, and a large amount of disengaged silver be thrown upon the bullion market in its stead. Previously to the Californian discoveries, silver was the circulating medium both in France and the United States, because since the periods when the double standard was fixed in those countries, it had increased rather more rapidly than gold; and all persons having payments to make, selected it, therefore, as the best medium. Its relative cheapness in France, however, as compared with gold, was less than 2 per cent., while in America it was merely fractional. When the Californian supplies came forward, the difference soon disappeared, and silver would have become relatively much the dearest, but for the displacement which then, of course, occurred. When 100 francs in gold, instead of being worth 102 francs in silver, fell in value to a fraction below 100 francs in the latter metal, it became forthwith more profitable to make payments in gold, and to sell silver at the market price, for exportation. In this way a large infusion of gold took place in France, while in the United States it absolutely became the most common circulating medium. Thus, the effect of the new supplies of gold has not been limited to that metal, but has been diffused over gold and silver, and hence, instead of being equal to 20 per cent., which would have been the case if the £150,000,000 of gold had alone been in question, it has been only $7\frac{1}{2}$ per cent. from being spread over the entire £400,000,000 of gold and silver.

By a recognition of this fact, all surprise at the absence of any very striking disturbances up to the present time is removed. There is quite enough to warrant the assumption that an influence, operating on one side to the extent of $7\frac{1}{2}$ per cent. has been partially rendered imperceptible by the force of circumstances in an opposite direction. In the first place, there have been the effects of increased production from free trade and free navigation, the latter of which, combined with railroads, have caused a large amount of goods that would otherwise have been in store

or *in transitu* to find its way to market. Next, it is impossible to estimate what may have been the extent of hoarding in Germany and Italy; and lastly, there remains to be taken into account the uniform tendency to a fall in prices, consequent upon the march of invention and the simplification of labour.

We have now, however, to consider the future. So long as there is any silver to be supplanted in countries where, owing to the existence of a double standard, it is optional for the debtor to pay either in gold or in silver, the effects of the increased production will continue to be extended to both metals; and consequently, if the surplus of gold this year should be, as has been estimated, £25,000,000, its influence upon prices could be but 6 or 7 per cent. But the period must rapidly approach when the displacement of silver will have ended, and when the changes brought about will be upon gold alone. In France the existing amount of silver is still, doubtless, very large; but this is not the case in the United States, and the proposed law by which the coins below a dollar are to be deteriorated 6.91 per cent. will prevent for the present any action upon that portion of the stock. In Germany the debased state of the silver coinage will likewise for a long time preserve it from displacement. In Holland silver has been already established as the standard, and cannot therefore be driven out. With regard to Eastern nations, it is difficult to form any estimate. On the whole, however, we may infer the possibility of the displacement process still occupying three or four years, and that during that time, therefore, the effects to be produced, will be spread, as they have thus far been, over both metals.

At the end of that period, the consequences will be felt by gold alone, and the relations of property measured by a gold standard will proportionably exhibit a more rapid disturbance. At the same time it must not be overlooked, that the increase of gold each year will have meanwhile diminished the percentage of alteration which would otherwise take place. For instance, the total amount of gold in the world, which is now assumed at £150,000,000, would then possibly be £250,000,000

and a production which, operating upon the first sum, would cause a rise in prices of 10 per cent., would under those circumstances, cause only an additional rise of 6 per cent. This is a feature of great importance in the whole question, because it will constantly tend to counteract that increasing ratio of disturbance which might be anticipated if the supply of each succeeding year should prove larger and larger. It is likewise to be borne in mind that, with a diminution in the purchasing power of gold, there will be a proportionate diminution in the inducement to seek it. If the quantity of gold were doubled to-morrow, a man who is at present content to work for one ounce a week would then not be satisfied with less than two ounces.

In the face, however, of these qualifying circumstances, and of the uncertainty of all the assumed totals that have been dealt with, it will be plain to most persons that there is enough to suggest some very decided ideas as to the main results that are coming on. A mistake of a hundred millions in the figures, one way or the other, would only make a difference of three or four years (where the annual supply is at the rate of £30,000,000) in the date of fulfilment. Even if we were to take the whole £400,000,000 of assumed money as liable to be acted upon, it would require little more than 15 years of the existing production to cause an alteration in the relations of property of 50 per cent.

But it is urged that the extraordinary impulse given to trade and luxury by these discoveries, and the greater prosperity of the whole world, will cause an increased demand for coin for circulation, and a vast consumption both of gold and silver in manufactures and the arts. It is difficult to see how these conclusions are arrived at. In California and Oregon, new communities have risen up, numbering two or three hundred thousand souls, among whom commerce has shewn an activity never before witnessed, and yet a few millions of bullion have sufficed to establish an abundant circulation, although all the means of economising it which are usual in older States have yet to be

introduced. We have here, therefore, a specimen of the limited demand that would be created even by the founding of the mightiest societies, while as regards more settled countries, it is certainly a mistake to suppose that the requirements for coin increase with the growth of commercial intelligence. Where a German peasant would hoard a few dollars, an Englishman would put the like amount into a savings' bank; and in the same manner even our pettiest tradesmen, instead of keeping money in a safe, resort now universally to some establishment that affords them the conveniences of a drawing account. Cheques, bills of exchange, postage stamps, clearing houses, circular notes, money orders, railroad and steam boat season tickets—all show the rapid tendency of civilization to supersede the necessity of a constant barter of the precious metals; and it may even be questioned whether, with the growth of morality and of detective skill, the danger of forgery, which was the sole objection to notes below £5, has not also disappeared. As regards an increased consumption in the arts, owing to an abundant supply, the very form of the supposition assumes a large alteration in value to have previously taken place. A reduction of 5 or 10 per cent. in such things as gold and silver, would make little difference in the number of purchasers of wrought articles, in which, after all, the manipulation constitutes one of the chief elements of expense. It is, moreover, against all experience to suppose that a large demand would be coincident with a falling market. With a possibility of gold and silver steadily declining in value, people would be much more likely to diminish than to increase their purchases. This ground of calculation seems, therefore, to have no better foundation than the other. Any increase of consumption that may possibly take place, is consequently likely to be altogether of an unimportant kind as regards the great question at issue; and even if anything of the sort should be observable, it will probably be more owing to electro-plating than anything else—an invention which it was at first thought would lessen the demand, but which has increased it, by superseding all inferior materials.

We arrive, therefore, at the unaltered conclusion, that the Californian and Australian discoveries, even at their present rate of yield, will produce effects of a momentous character, which nothing is likely in any material manner to counteract. What may be witnessed if further experience at Port Philip and Queen Charlotte's Island should realise the extraordinary contingencies that seem to be indicated, and if the supply of silver should simultaneously increase to the extent that some persons anticipate, is a problem upon which each enquirer will form his own opinion.

It still remains to point out that simultaneously with these changes the increase of production in articles of food, clothing, and luxury, which has been strikingly manifested as a consequence of free trade, will steadily continue, and will thus most probably prevent many of those articles from rising in price—that is to say, although a man 10 years hence might have to pay two sovereigns for some few articles, the production of which had remained stationary, where he would now pay only one, he might possibly be able to get as much flour, or coffee, or calico for his one sovereign as he gets at this moment. If this be the case, it will be said the position of the annuitant will be unchanged. But there is something to be added. Although the income of the annuitant might obtain for him all that he now gets, and his position will be actually as good as ever, it will not be so by comparison. His income will have stood still while all others have been increasing, and, although the greater supply of articles of general consumption will enable him to live as well as he formerly did, society at large will have advanced to a much more extensive expenditure. A cottager's wife of the present day, for instance, in consequence of the improvement in manufactures, wears clothing which a hundred years back could not have been obtained by persons of wealth; but her relative position in the social scale is precisely the same as formerly. If the wealthy lady of that time were now living, and could only get for her money what she got then, she would

be in comparative poverty; and it will be seen, therefore, that it does not follow from the fact of an individual being able to enjoy for the future all that he has hitherto obtained, that he may not practically fall from a good income to a narrow one.

With regard to minor points, little requires to be said. Some people are still found to ask whether the Bank is to go on giving the price of £3 17s. 9d. per ounce for gold; whereas all that the Bank gives when it issues a note, is an acknowledgment that a certain amount of gold has been deposited with it, which the bearer may have back whenever he likes to apply for it. Gold constitutes the general measure of price, and is therefore the only thing that has not a price of its own. It is simply receivable at the rate mentioned; that is to say, when one man talks of owing another £3 17s. 9d. he means that he owes him an ounce of gold. To speak literally of a money price of gold is just as if a person were to ask how much tea he must give for a pound of tea.

Others, again, inquire if the increase of supply will not affect the rate of interest for money, which is plainly an impossibility, since the £5 that may be paid for interest is just affected to the same proportionate extent as the £100 which is lent. If a man borrowed 100 loaves of bread, on condition of returning 105 loaves at the end of the year, he would not expect the rate of interest of five loaves to be affected in any degree by an increased production of bread. The same illustration, if it be applied to the question whether the price of the funds can be affected, will show that in that case also the gold discoveries can have no direct action. The recent rise in Consols is merely consequent upon a continuance of that absence of healthy enterprise which has been observable ever since the madness of 1847. Concurrently with the increase of capital caused by the active events of the last few years, there have been no fresh outlets for its employment, and the public therefore rush to Consols and Exchequer-bills, or other established securities.

As far as regards the general changes which these discoveries are to produce in the affairs of the world, it may be hoped few

will be found to question that, like everything which happens naturally—that is to say, independently of human contrivance—they can have no result but that of contributing to the march of civilization. In the first place their sole material effect is an increase of a product which, apart from any conventional value it may have had, is more beautiful, pure, and useful than any other. Inasmuch as we can turn gold to more account than sand, the world is so much the better off by finding that, mixed with what was thought to be all sand, there is a large amount of gold. To deplore the announcement of this fact is simply to deplore that another gift has been laid open to us. On the other hand, their consequences upon the movements of mankind are more palpably beneficial than those of any other physical event yet recorded. History shows the constant influences exercised to induce the race to spread over the earth, so as to avail themselves of all that it offers, instead of yielding to the selfish indolence that confines them to limited spots; and whether this is brought about by an escape from Egyptian bondage, by barbarian incursions, by the failure of crops, or by political persecutions, the beneficent end is no less plainly arrived at. The potato rot and the continental anarchy of 1848 have both caused a distribution of those who were unteachable in any different way, and who would otherwise have gone on from misery to misery, without making the smallest effort to seek a position where, instead of being a torment, they might be a benefit to their fellow men. The British people, although more adventurous, likewise require stimulants to drive them forth; but the disturbance necessary in their case is happily less severe, and a gold mania has been sufficient to accomplish that for which famine, war, or tyranny might otherwise have been permitted.

As to any individual inconvenience which the impending disturbance in the relations of property may cause, there has never yet been the smallest progress that has not upset some quiet arrangements that people had hoped might be perpetual. Every breath blows down a leaf somewhere, but the world is not

to remain stagnant. When the return to specie payments took place in 1819 there was great disturbance, but it was nothing more than the fulfilment of a direct bargain, and it was not for those who had taken the chance of that fulfilment to complain. The same doctrine must hold good at present. Moreover, those who now apprehend serious consequences to any particular description of property, can act upon their apprehensions if they see fit; and if they decline, they must not clamour against results they have deliberately chosen to wait for. Distrustful of all enterprise, they can continue to hold annuities, while those who prefer the opposite course may go with the stream, and find, in promoting the very movements that are in progress, abundant means for new investment. If each holder were to dispose of his property from time to time as he became apprehensive, individual losses would be so diffused that in the end they would be almost inappreciable, while, with regard to their future transactions, persons can make any bargains they please. It is true that those who depend upon property held in trust have less choice of action; but those who tied the property up without allowing any future exercise of discretion, acted upon their own judgment, not with any desire to benefit society, but to secure private advantages for their families, and society must not be called upon to remedy the mistake. A more cheering point of reflection, however, for these parties should be, that in the majority of instances it will be in their power, instead of waiting to see their incomes diminish during a life of unhealthy idleness, to employ their faculties so as to wrest from the new order of things far more than it can take away.

(From the "TIMES" August 6, 1852.)

MONEY-MARKET AND CITY INTELLIGENCE.

Friday Evening.

Although nothing could be less profitable than a desultory discussion upon currency questions, the tone of the communications received a few weeks back with regard to the effects of the increased supply of gold, renders it difficult to withhold from any one of them the courtesy of a specific reply. As a general rule, it is essential that in a journal without space at command, such matters should be treated only in a broad and axiomatic form, and that the responsibility should be declined of making good in detail all the abstract principles that are assumed or indicated; but, waving this consideration in the present instance, a few concise words may be devoted to each of the points that have been raised.

The first enquiry was from "A Liverpool Merchant," who asked,—Ought not the amount of exchange bills in circulation to be added to the estimate of £400,000,000 of gold and silver that will be affected by the new discoveries; and in such case, would it not be correct to assume that the total, which must be acted upon before any disturbance can be felt, would be nearer £400,000,000,000, than £400,000,000? The next correspondent, "Spectator," took an analogous view, and suggested that at least all the paper convertible on demand, should be included. To both of these letters a reply was virtually given by "An Observer." This latter correspondent, however, while he disagreed with the previous ones in their estimates of the amount of currency to be effected, seemed at variance with *The Times* on the

questions of the claims of the annuitant classes, whom he looked upon as threatened with a danger which he almost indicated as entitling them to compensation or protection. "Spectator," on the other hand, expressed an opinion that the *The Times* had described the condition of these classes so as to excite a needless sympathy for them.

Another writer, under the initial "H," while he appears to concur in all the general principles laid down, thinks that the effect of the immigration of Chinese, who will take back large quantities of gold to their own country, has not been sufficiently estimated as a counteracting cause. Another, signing "Delta," considers that the maintenance of the standard of value will be found the cause of whatever evil may happen, since a Californian, getting gold at 40s. per ounce, and disbursing it here for goods at £3 17s. 9d., would get those goods at half their value. "I.H.M." takes the same ground, and denies that when one man talks of owing another £3 17s. 9d., he means simply that he owes him an ounce of gold, since if gold is so cheap in one part of the world that he could obtain an ounce and a quarter for £3 17s. 9., the two things cannot be identical. He also contends, that whatever may be said to the contrary, the rate of interest must be affected by the increased supply of gold, because it must cause an increase in the number of lenders, and no corresponding increase in the number of borrowers. Finally, "An Old Banker" thinks the effect of confidence has been overlooked, and that its influence on the money-market is far more important than that of any alteration in the actual supply of money. At the same time, he expresses a belief that the prices of agricultural produce from the effects of free trade would have been at least 20 per cent. under their present rate but for the contemporaneous supply of gold.

With regard, first, to bills of exchange or bank notes being equivalent to gold, it is merely necessary to remark that there is no more identity between them, than between a promise and its performance. The value of all such documents must depend entirely

on the confidence felt in their redemption. If a contractor were to issue bills, promising to deliver a certain quantity of wheat on demand, or at 60 days' date, no one would expect that the natural fall in the value of wheat consequent upon a double crop would be in any way interfered with by such a proceeding. In like manner, it is impossible that any amount of paper transactions can interfere in the slightest degree with the fall in the exchangeable value of the precious metals from an increased supply. All transactions have ultimately to be adjusted by them, and if in 1862 the quantity shall have been practically doubled, then it will be as easy to pay £100 (either in gold, or in bills or notes, as its representatives) as it would now be to pay £50.

As respects the position of the annuitant, "Spectator" remarks that there must have been some mistake in representing that he can be prejudiced by the impending changes, since it has been admitted that the fall in prices consequent upon the march of improvement may enable him to get as much for his money as he gets now. "Surely" it is said, "such a man, if not envious or foolishly disposed to vie with his betters, is practically as well off as at first." But this is the very thing that was pointed out. The statement was that the position of the annuitant "would be actually as good as ever, although it would not be so by comparison." "Observer," again, contends that so far from preaching contentment to the annuitant, "we should open our eyes fairly, and in time, to the risk he is in, and not deceive ourselves by plausible or ingeniously suggested palliatives." The question, however, arises, what is meant by "opening our eyes to the risk?" Is it intended that the annuitant should claim compensation? and, if so, upon what moral or legal arguments could that claim be founded?

In connexion with the immigration of Chinese and their hoardings, the state of the matter is very clear. Just in proportion to their labour at the mines will they increase the supply of gold; and in no other way, except by the fair profits of commerce, which are inconsistent with the practice of hoarding, can

they obtain possession of it. It has often been suggested that the absorption of the precious metals by those extensive countries which are at present without them will greatly neutralize the augmented production. But by what means is the absorption to be brought about? The people of those countries must either come to swell the ranks of the gold-finders, and in that way accelerate the general yield, or they must wait the slow gains of steady trade, which they are not likely all at once to carry on with a skill that should put them in possession of many millions.

The next point is the maintenance of the standard of value. This, however, is nothing more than a question as to the maintenance of contracts. The only effect of an alteration in the standard of value would be to enable a man who had entered into a contract for the delivery of a certain weight of gold to discharge his obligation in less than the stipulated amount, or to compel him to pay more than that amount. If any one objects to the existing standard of value, he is at liberty to arrange all his future contracts without reference to it, but, so long as he voluntarily enters into engagements which are based upon it, he must be prepared to hold to his bargains, come what may. If he should prefer in his future transactions to stipulate to receive payment in corn, iron, or anything he may deem less liable to fluctuation than the precious metals, he is perfectly at liberty to do so. As to the miners in California or Australia obtaining gold at 40s. per ounce and disbursing it here at £3 17s. 9d., whatever difference may at any time prevail between its price at the point of production and its price at New York or in London is simply caused by the expense, risk, and delay of sending it to the spot where it can be converted into coin. Coined it is worth £3 17s. 9d. per ounce, uncoined it is worth the same, less the expense of conveying it to and from the nearest mint.

With respect to the rate of interest and the anticipated increase of lenders over borrowers, it is hard to see upon what the assumption is founded. If two sovereigns, ten years hence, should be worth only as much as one sovereign is worth now,

then a borrower at that period will have to borrow two in place of one.

Lastly, as concerns the question of confidence, raised by "An Old Banker," it will be found that it has no necessary place in a discussion on the intrinsic relations of the precious metals. It belongs to the subject of credit; which, however mighty in its bearings on commercial vicissitudes, is one that is completely distinct. In relation to the influence of the gold discoveries on the prices of agricultural produce, as suggested by the same writer, it is plain that it could only be the same upon them as upon those of any other class of commodities. If it has caused a rise of 20 per cent. in their favour, it must have caused a rise of 20 per cent. in everything else. It is very common to hear the assertion that our recent commercial policy has had great help from some exclusive relief which has thus been afforded; but inasmuch as the gold discoveries cannot have altered the laws which regulate the balance of trade, such an impression must be erroneous. They may, it is true, have created a vague feeling of confidence on the part of the occupiers of land, and thus, by checking despondency, have prevented foolish sacrifices; but in no other manner can they have altered the relative position of these parties and of those who are engaged in other branches of industry.

Comparative Table, showing the annual produce (approximate calculation) in value of fine gold and silver, for 1846 and 1850, the first being two years before the discovery of the rich deposits of gold in California; the latter, two years after the discovery.

	1846.			1850.		
	Gold. £	Silver. £	Total. £	Gold. £	Silver. £	Total. £
California .	—	—	—	12,000,000	62,088	12,062,088
United States . . .	237,336	1,864	289,230	115,430	11,444	126,874
Mexico . . .	249,753	3,457,020	3,706,773	382,901	5,383,333	5,766,234
New Grenada . . .	252,407	42,929	295,336	252,407	42,929	295,336
Peru	96,241	1,000,583	1,096,824	96,241	1,000,583	1,096,824
Bolivia	60,337	460,191	520,548	60,357	460,191	520,548
Chili	145,585	297,029	442,614	145,585	297,029	442,614
Brazil	259,871	2,003	261,874	289,068	2,227	291,295
Total of N. & S. America } }	1,301,560	5,261,619	6,563,179	13,341,989	7,259,824	20,601,813
Russia	3,414,427	167,831	3,582,253	4,175,860	171,817	4,347,477
Norway	—	32,346	32,346	—	35,607	35,607
North Germany . . .	357	138,022	138,379	357	138,022	138,379
Saxony	—	198,200	198,200	—	198,200	198,200
Austria	282,750	282,654	565,404	288,708	286,971	575,679
Piedmont	17,841	7,444	25,285	17,841	7,444	25,285
Spain	2,498	227,499	229,997	2,498	440,210	442,708
United Kingdom	—	109,989	109,989	—	160,000	160,000
Africa	203,900	1,056	204,956	203,900	1,056	204,956
Borneo	305,900	1,584	307,484	305,850	1,584	307,484
Ava	100,000	517	100,517	100,000	517	100,517
Malacca	72,240	374	72,614	72,240	374	72,614
Sumatra	63,719	330	64,049	63,719	330	64,049
Annan, or Tonquin .	30,585	53,460	84,045	30,585	53,460	84,045
Various countries †	50,975	33,000	83,975	50,975	33,000	83,975
Total of Europe, Africa, and Asia } }	4,545,192	1,254,306	5,799,498	5,312,533	1,528,592	6,840,975
Total of N. & S. America } }	1,301,560	5,261,619	6,563,179	13,341,989	7,259,824	20,601,813
Total	5,846,752	6,515,925	12,362,677	18,654,522	8,788,416	27,442,788

† Exclusive of China and Japan, which produce large quantities of gold and silver, the amount of which is quite unknown to Europeans.

[NOTE.—At the beginning of the 19th century, Baron Humboldt's estimate (*Essai Politique*, tome 2, page 633) of the annual produce of North and South America was 17,291 kilogrammes=46,331 lb. troy of gold, and 795,581 kilogrammes=2,131,770 lb. of silver; value of both metals in dollars, 43,500,000, equal to £9,243,750; the produce of Europe and Northern Asia at the same time was 4,916 lb. gold, £250,593; and 199,298 lb. silver, £657,683. Total value of the precious metals raised in America, Europe, and Northern Asia, £10,152,026.]

The following table is similar to the above, with the exception that quantities are substituted for values:—

	1846		1850.	
	Pure Gold.	Pure Silver.	Pure Gold.	Pure Silver.
	lb. troy.	lb. troy.	lb. troy.	lb. troy.
*California	—	—	235,409	18,814
United States	4,625	565	2,263	3,165
Mexico:—In 1846, by the gold washings, 980 lb. fine gold	4,900	1,047,582	7,509	1,631,313
In 1846, by operation of parting, 3,920 lb. fine gold				
New Grenada:—In 1846, by the English Colombian Gold Company, 343 lb. fine gold	4,954	13,009	4,954	13,009
In 1850, by the English Marmato Gold Company, 576 lb. fine gold, and 350 lb. fine silver				
Peru	1,888	303,207	1,888	303,207
Bolivia	1,184	139,452	1,184	139,452
Chili, in 1850, by the English Copiapo Company, about 13 lb. fine gold, and 7,000 lb. fine silver	2,856	90,009	2,856	90,009
*Brazil:—In 1846, by the English St. John d'el Rey Gold Company, 1,425 lb. gold, containing 20 per cent. silver	5,096	607	5,668	675
1850, by ditto, 2,517 lb. gold, containing 20 per cent. silver				
1846, by the English Imperial Brazilian Gold Company, 314 lb. of gold, containing about 14 per cent. silver				
1850, by ditto, 379 lb. gold, containing about 14 per cent. silver				
1846, by the English National Brazilian Gold Company, 891 lb. gold, containing about 14 per cent. silver				
1850, by ditto, 120 lb. gold, containing about 14 per cent. silver				
Total of North and South America	25,503	1,594,431	261,731	2,199,644
Russia:—1846, by private mines in the Ural	66,985	50,858	81,919	52,053
Public ditto				
Private, Siberia				
Public, ditto				
73,587 lb.				
Norway (Kongsberg silver mines)	—	9,802	—	10,790
North Germany (Hartz Mountains)	7	41,825	7	41,825
Saxony	—	60,606	—	60,606
Austria, in 1846, by private mines, about 4,100 lb. pure gold, and 34,400 lb. pure silver. By Government mines, about 1,400 lb. pure gold, and 51,200 pure silver	5,549	85,653	5,663	86,961
Piedmont	350	2,256	350	2,256
Spain	49	68,953	49	133,397
United Kingdom	—	33,330	—	48,484
*Africa	4,000	320	4,000	320
*Borneo	6,000	480	6,000	480
*Ava	1,961	157	1,961	157
*Malacca	1,420	113	1,420	113
*Sumatra	1,250	100	1,250	100
Annan or Tonquin	600	16,200	600	16,200
Various countries	1,000	10,000	1,000	10,000
Total of Europe, Africa, and Asia	89,171	384,653	104,219	463,742
Total of North and South America	25,503	1,594,431	261,731	2,199,644
Grand Total	114,674	1,979,084	365,950	2,663,386

In 1801 the quantity of pure gold produced in America was 46,331 lb.; in Europe and Northern Asia (exclusive of China and Japan), 4,916 lb.; total produce, 51,247 lb.; =55,910 lb. British standard gold=£2,612,200.

In 1846 the quantity of pure gold produced in America was 25,503 lb.; in Europe, Africa, and Asia (exclusive of China and Japan), 89,171 lb.; total produce, £114,674 lb.=125,103 lb. British standard gold=£5,846,772.

In 1850, the quantity of pure gold produced in America was 261,731 lb.; in Europe, Africa, and Asia (exclusive of China and Japan), 104,219 lb.; total produce 365,950 lb.=399,247 lb. British standard gold=£18,654,322.

* Those countries marked thus* have no silver mines at work; the silver stated is estimated as having existed in the native gold, to the average amount of 8 per cent.

The above quantities are probably less than the actual production. The duties on gold in Russia on the produce of the private mines are heavy, varying from 12 to 24 per cent.; in Austria they amount to 10 per cent.; in Brazil to 5 per cent., and are understood to lead to a great deal of smuggling. In other countries, such as the United States, where there are no duties, the gold and silver stated in the table are only the quantities brought to the mints to be coined, there being no means of determining the quantity used in jewellery, and other arts and manufactures.

The above tables, imperfect though they be, will suffice to show that the produce of gold in the world has greatly increased in the last few years. It would appear that it has risen from 114,674 lb. in 1846, to 365,950 lb. in 1850; in those five years, the increase has been at the rate of 219 per cent., whilst silver has only increased from 1,979,084 lb. in 1846, to 2,663,386 lb. in 1850, or $34\frac{1}{2}$ (34.5) per cent. The former metal is, therefore, apparently increasing at the rate of 44 (43.8) per cent. per annum, and the latter at 7 (6.9) per cent. The greater part of the increase in silver is in Mexico, which is doubtless owing to a variety of circumstances, such as restored tranquility, richer mines, and greater skill. It would not therefore, be safe, to count upon such an increase every year, but we are certainly not exaggerating in saying that silver is now regularly increasing throughout the world. It may be estimated at an average of $2\frac{1}{2}$ per cent. per annum.

It is a remarkable fact, however, and worth recalling, that in the country where the greatest increase of silver has taken place, there was concurrently a loss of thousands of pounds of English capital by the various English silver mining companies; so much so that none of all the silver mining companies projected to work mines in Mexico between 1824 and 1830 have been successful. Some of them were being wound up during the very time when mining was prosperously conducted by the Mexicans. This seems to have been owing to a want of knowledge, or of control, or to the mischief of share jobbing in the English companies; but,

whatever may have been the cause, the natives of that country have found silver mining to be profitable. The enormous profit of £240,000 a-year obtained by the old Spaniards from the Valencianna mine, a profit larger than all the tin and copper mines of England put together, is generally looked upon more as a fable than a reality, by those who have heard casually of silver mining as conducted by English mining companies.

The English gold mining companies have done better, and probably, had they some 20 years ago, the skill and knowledge of the present day, they would have been highly successful.

The quantity of gold produced in America at the beginning of this century was, according to Humboldt, 46,331 lb. troy, and that of silver 2,131,770 lb. In 1846 the produce of gold in America had fallen to 25,503 lb. Compared with the silver then produced, viz., 1,594,431 lb., the gold was therefore 62 times less than the silver. In 1850 the yield of gold, in consequence of the great discoveries in California, in 1848, had risen to 261,731 lb., being in weight only eight times less than the weight of the silver.

The annual produce of gold in the whole world (excepting Africa and some parts of Asia) at the commencement of the century was in a somewhat greater ratio, being 1 lb. of gold to 45 lb. of silver; in the year 1846 the produce of gold (including Africa, but excepting China and Japan) was at the rate of 1 to 17. In 1850 the produce of the same countries had risen to 1 of gold to 7 of silver.

As regards the produce of gold last year in California, it would appear that it must have amounted to about 82,118,500 dollars, equal to £17,339,544. The yield of the newly discovered gold mining region at Bathurst, New South Wales, and at Mount Alexander and Buninyong, Victoria, may be stated at fully £1,000,000. Hence there is an increase to the production of 1850 of 124,382 lb. troy of fine gold; the total produce of gold in 1851, being, therefore, 490,332 lb.; at £50. 19s. 5½d. per lb. pure gold, equal to £24,994,066. There is much reason to believe (*vide* the comparative table) that the annual produce of

silver is now steadily increasing, say at the very low rate of $2\frac{1}{2}$ per cent. The yield of silver in 1851 will thus be 2,729,970 lb. troy, equal to £9,008,900. Consequently the total value of the produce of gold and silver last year is £34,002,966.

But, large as the produce of gold is thus shown to have been last year in California and Australia, it is likely to be greatly increased this year, it being confidently expected by the Americans that the recent discoveries of very rich deposits in various districts of California will raise the exports for the twelve months to 100,000,000 dollars, equal to £21,041,666. This, moreover, is a very moderate allowance, as the exports alone in the first three months, are known to have amounted to 3,900,000, dollars, more than those of the corresponding three months in 1851; while, as regards Australia, late news from that quarter makes it probable that the produce there will at least amount to one-half of the yield of California in 1850, or £6,000,000. The exports merely from Australia up to January 15th (although gold dust was selling as low as £2 17s. per ounce) have amounted to 284,000 ounces, equivalent to £1,000,000, a part of the yield of about four months' digging. Should other countries only yield at the same rate as in 1850 or 1851, viz., £6,654,522, this, added to the produce of California and Australia, will amount to £33,696,188 or 661,032 lb. troy. Estimating the increase in the yield of silver at $2\frac{1}{2}$ per cent. the amount of silver for this year is 2,798,219 lb.; at £3 6s. per lb.; equal to £9,234,122. The total value of both gold and silver for the present year is, therefore, £42,930,310.

The average yearly coinage of gold during the first 30 years of this century was—in Great Britain, £1,700,000; France £1,300,000; in the United States, £55,000; total, £3,055,000.

The following is a statement of the recent gold coinage in the same countries, beginning with the year in which the gold discovery was made in California:—

	Great Britain.	France.	United States.	Total.
	£	£	£	£
1848	2,451,999	1,234,472	786,565	4,473,036
1849	2,177,000	1,084,382	1,875,158	5,136,540
1850	1,491,000	3,407,691	6,662,854	11,561,545
1851 (10 months)		10,077,252	12,919,695	—

The gold coinage last year in the United States exceeded by £3,398,927 the largest coinage of the same metal ever made in the United Kingdom. And the coinage in France during the first 10 months exceeded by £556,494 the memorable gold coinage in this country of £9,520,758 in the year 1821.

The annual consumption of the precious metals (exclusive of coinage) in Europe and America, is supposed to be about £4,840,000, to which there may be added for the other quarters of the globe £1,660,000. Total, £6,500,000. It is important, but difficult to determine, how much of this sum consists of gold. Mr. Jacob, about 20 years ago, estimated the annual consumption of gold in Great Britain at £1,636,000. The other countries of the globe would at least consume half as much more, making £2,454,000, to which the annual gold coinage has to be added; comparing this total with the quantity of gold produced at the beginning of the century, or even for many years after, it then appears that gold from the mines was not raised in amount equal to the entire consumption; besides which, it seems to have been used relatively in a greater proportion than silver, and accounts for the premium in France of 12 francs per mille over silver, which gold not unfrequently commanded, till the recent discoveries, for a pound troy of gold in France in 1802 was found to be exactly equal to 15 lb. 6 oz. of silver, but afterwards became equal to 15 lb. 8 oz. Now, however, the premium is likely to be reversed most materially, for deducting the £2,454,000' of gold consumed in the arts, from the supposed yield of the gold mines in the present year, viz. £33,696,188, leaves £31,242,188 to be converted into coin; being a larger sum by £5,239,053 than

the total circulation of gold coin in Great Britain in the year 1780. The general inference, that specie must be accumulating, is further borne out by the fact that, notwithstanding discounts are unusually low in the three principal cities of the world, yet there is in each city a notable increase of bullion, compared with 1848, as the following table will show.

			£
Bank of England, week ending	May 6, 1848	. . . .	12,826,108
Do. do.	May 8, 1852	. . . .	20,231,037
Bank of France, week ending	May 4, 1848	. . . .	3,534,165
Do. (last return)	April 8, 1852	. . . .	23,506,204
Banks of New York, quarter ending	March, 1848	. . . .	1,404,125
Do. do	March, 1852	. . . .	2,029,448

Summary of the quantity of bullion in the above-named Banks, in 1848, and the nearest corresponding period in 1852.

	Bank of England. £		Bank of France. £		Banks of New York. £		Total. £
1848	12,826,108	. .	3,534,165	. .	1,404,125	. . . .	17,764,398
1852	20,231,037	. .	23,506,204	. .	2,029,448	. . . .	45,766,689
							Increase of bullion in 1852 . . . £28,002,291

By the last return of the Bank of England, the specie appears to the value of £20,231,037, being the largest amount she has ever held, and £3,592,722 above her highest accumulation, previous to the development of the wealth of California.

It may be stated generally that there was in 1850 five times as much gold produced in North and South America as in any of the most productive years of the American mines under the Spanish Government. At the same time, the silver mines of America were yielding quite as much silver as at the beginning of the century, when they were nearly as productive as at any former or later period under Spanish dominion.

Yet notwithstanding the great increase in the produce of gold relative to silver, it is a curious fact that the price of silver has not risen, on the contrary, it has fallen in value. In the course of the week ending April 17th, 1852, £580,000 worth of silver

was sold at 5s. an oz., British standard, which is only equivalent to 64s. 9d. per lb. troy for pure silver. At that rate 1 lb. of pure gold is worth $15\frac{3}{4}$ (15.74) pounds of pure silver. In January, 1851, gold was only $15\frac{1}{4}$ (15.3) times more valuable than silver.

The following is the estimated produce of the precious metals, in tons, in 1801, 1846, 1850, 1851, and the probable amount of 1852:

Year.	Gold. Tons.	Silver. Tons.		
1801 . . .	19 . . .	856, or 1 lb. of gold to 45 lb. of silver.		
1846 . . .	42 . . .	727,	„	17 lb. „
1850 . . .	134 . . .	978,	„	7 lb. „
1851 . . .	180 . . .	1,002,	„	5 lb. „
1852 . . .	242 . . .	1,027,	„	4 lb. „

Although the 242 tons is an increase of no less than 12 times the quantity produced at the beginning of the century—a quantity of the glittering treasure that is fraught with the mightiest consequences to society; yet as respects bulk, it sinks into perfect insignificance, for if it were melted into bars, a closet 9 feet high, 8 long, and 8 broad, would hold it all. It would require 21,713 times as much space to hold all the iron that is now smelted in Great Britain.

TABLES RELATIVE TO THE COINS OF GREAT BRITAIN.

NO. I. ENGLISH COINS.--Account of the Quantity of Fine Silver coined into 20s. or the Pound Sterling; the Quantity of Standard Silver, of 11 oz. 2 dwts. fine and 11 dwts. alloy, contained in 20s. or the Pound Sterling, in the different Reigns, from the time of Edward I. to the Reign of William IV. A similar account with respect to Gold. And an account of the proportionate value of Fine Gold to Fine Silver, according to the number of Grains contained in the Coins. Calculated in Grains and 1000th parts Troy Weight.

A. D.	Anno Regni.	Silver.		Gold:		5
		1.	2	3	4	
		Number of Grains of Fine Silver in 20 Shillings, or the Pound Sterling, as coined by the Mint Indentures.	Number of Grains of Standard Silver, 11 oz. 2 dwts. Fine in 20 Shillings, or the Pound Sterling, as coined by the Mint Indentures.	Number of Grains of Fine Gold in 20 Shillings, or the Pound Sterling, as coined by the Mint Indentures.	Number of Grains of Standard Gold, 22 Carats fine, in 20 Shillings, or the Pound Sterling, as coined by the Mint Indentures.	Proportionate Value of Fine Gold to Fine Silver, according to the Quantity of each Metal contained in the Coins.
		Grains.	Grains.	Grains.	Grains.	Gold to Silver
1066	Conquest .	4,995 000	5,400 000			
1280	8 Edward I.	4,995 000	5,400 000			
1344	18 Edward III.	4,933 333	5,333 333	407 990	445 080	1 to 12 091
1349	23 " "	4,440 000	4,800 000	383 705	418 588	1 — 11 571
1356	30 " "	3,996 000	4,320 000	358 125	390 682	1 — 11 158
1401	3 Henry IV.	3,996 000	4,320 000	358 125	390 682	1 — 11 158
1421	9 Henry V.	3,330 000	3,600 000	322 312	351 613	1 — 10 331
1464	4 Edward IV.	2,664 000	2,880 000	257 850	281 291	1 — 10 331
1465	5 " "	2,664 000	2,880 000	238 750	260 454	1 — 11 158
1470	49 Henry VI.	2,664 000	2,880 000	238 750	260 454	1 — 11 158
1482	22 Edward IV.	2,664 000	2,880 000	238 750	260 454	1 — 11 158
1509	1 Henry VIII.	2,664 000	2,880 000	238 750	260 454	1 — 11 158
1527	18 " "	2,368 000	2,560 000	210 149	229 253	1 — 11 268
1543	34 " "	2,000 000	2,162 162	191 666	209 090	1 — 10 434
1545	36 " "	1,200 000	1,297 297	176 000	192 000	1 — 6 818
1546	37 " "	800 000	864 864	160 000	174 545	1 — 5 000
1547	1 Edward VI.	800 000	864 864	160 000	174 545	1 — 5 000
1549	3 " "	800 000	864 864	155 294	169 412	1 — 5 151
*1551	5 " "	400 000				
—	" "	1,760 000	1,902 702	160 000	174 545	1 — 11 000
1552	6 " "	1,768 000	1,911 351	160 000	174 545	1 — 11 050
1553	1 Mary . .	1,760 000	1,902 702	159 166	173 636	1 — 11 057
1560	2 Elizabeth	1,776 000	1,920 000	160 000	174 545	1 — 11 100
1600	43 " "	1,718 709	1,858 064	157 612	171 940	1 — 10 904
1604	2 James I.	1,718 709	1,858 064	141 935	154 838	1 — 12 109
1626	2 Charles I.	1,718 709	1,858 064	128 780	140 487	1 — 13 346
1665	18 Charles II.	1,718 709	1,858 064	118 651	129 438	1 — 14 485
1717	3 George I.	1,718 709	1,858 064	113 001	123 274	1 — 15 209
†1816	56 George III.	1,614 545	1,745 454	113 001	123 274	1 — 14 287

* 1551.—5 Edward VI.] The coinage of debased silver money in the 5th year of Edward VI. of 3 oz. fine, ought more properly to be considered as Tokens. The sum of £120,000 only was so coined.—(See *James's Essays*, chap. iv.)

† 1816.—56 George III.] The government having taken the coinage of silver into its own hands, there is at present no fixed price paid to the public, by the Mint, for standard silver. And supposing the government to continue the present Mint Regulations, and to keep Gold at 77s. 10½d. an ounce, as the price of silver varies, the relative value of gold to silver will vary in like proportion.

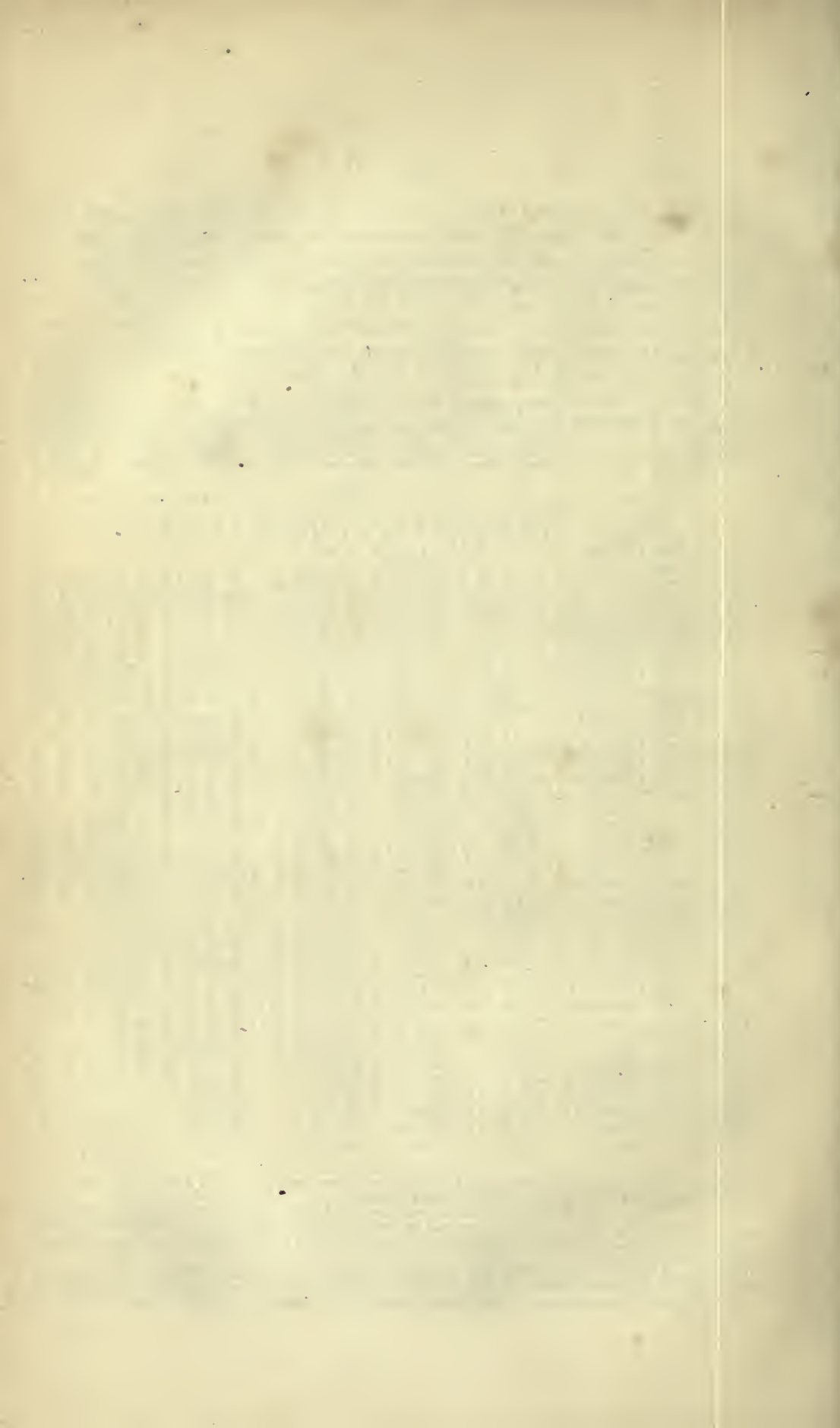
No. II. ENGLISH COINS.—Account of the English Silver and Gold Coins; showing their value, the seignorage or profit upon the coinage, and the price of the Pound Troy of Standard Gold and silver, from the Conquest to the present time.

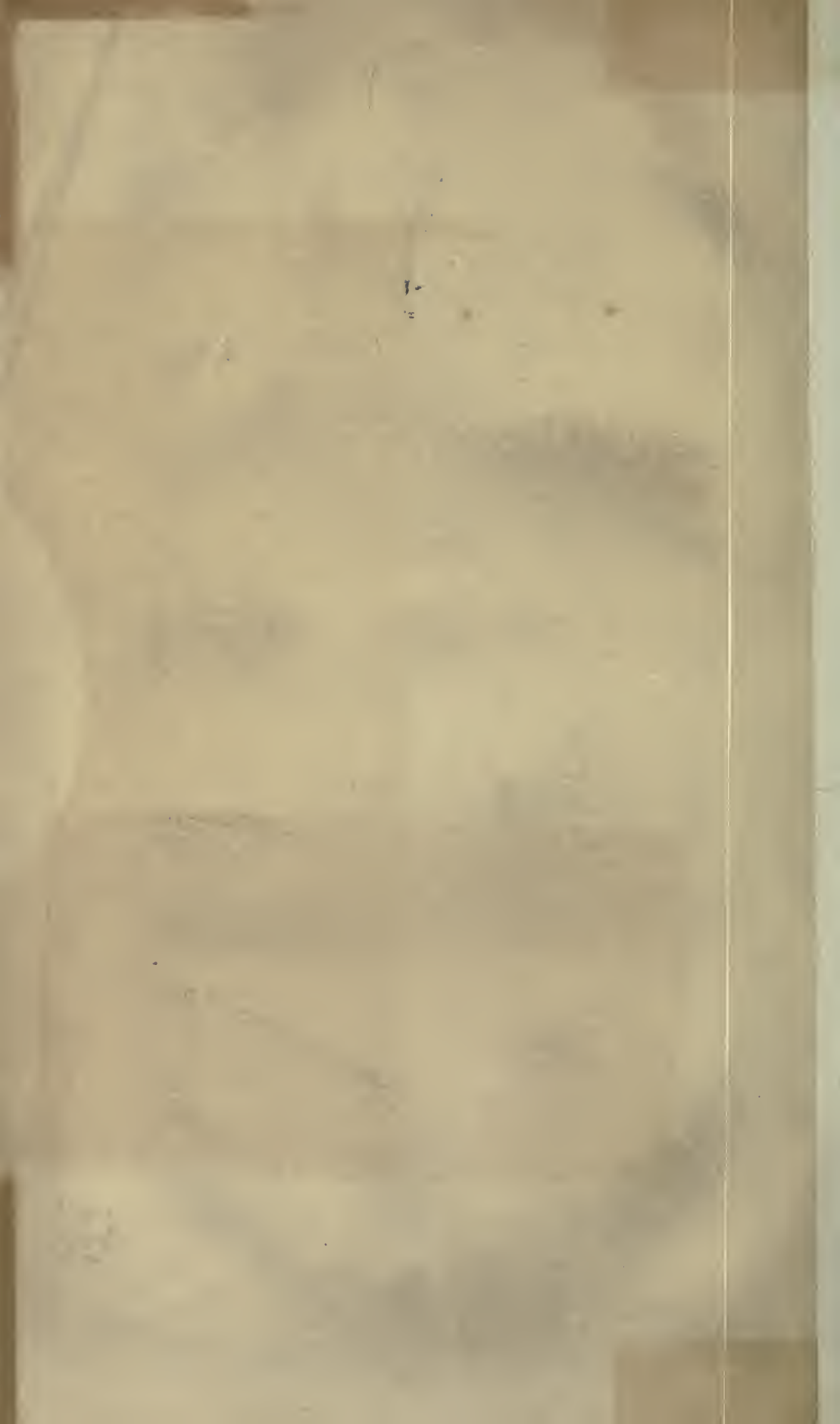
A.D.	Anno Regni.	Silver.				Gold.			
		1	2.	3.	4.	5.	6.	7.	8.
		Fineness of the Silver in the Coins.	Pound Weight of such Silver coined into	Profit or Seignorage on the Coinage.	Equal to the Mint Price for Standard Silver of 11 oz. 2 dwts. fine Troy weight.	Fineness of the Gold in the Coins.	Pound Weight of such gold coined into	Profit or Seignorage on the Coinage.	Equal to the Mint price for Standard Gold of 22 Carats fine Troy Weight.
	oz dts	£ s. d.	£ s. d.	£ s. d.	crts. gns.	£ s. d.	£ s. d.	£ s. d.	
1066	Conquest	11 2	1 0 0						
1280	8 Edward I.	—	1 0 0	0 1 0	1 0 3 ⁴				
1300	28 "	—	1 0 3	0 1 2 ¹					
1344	18 Edwd. III.	—	1 0 3	0 1 3	1 0 3 ⁴	23 3 ¹	13 3 4	0 8 4	12 10 0
1349	23 "	—	1 2 6	0 1 3	1 2 8	—	14 0 0	0 11 8	13 3 9
1356	30 "	—	1 5 0	0 0 10	1 5 9 ¹	—	15 0 0	0 6 8	14 8 4
1394	18 Richard II	—	1 5 0	0 0 10	1 5 9 ¹	—	15 0 0	0 5 0	14 9 11
1401	3 Henry IV.	—	1 5 0	0 0 10	1 5 9 ¹	—	15 0 0	0 5 0	14 9 11
1421	9 Henry V.	—	1 10 0	0 1 0	1 10 11 ¹	—	16 13 4	0 5 0	16 2 9
1425	4 Henry VI.	—	1 10 0	0 1 0	1 10 11 ¹	—	16 13 4	0 5 10	16 1 11
1464	4 Edwd. IV.	—	1 17 6	0 4 6	1 15 2 ¹	—	20 16 8	2 10 0	18 0 5
1465	5 "	—	1 17 6	0 4 6	1 15 2 ¹	—	22 10 0	1 0 10	21 1 10
1470	49 Henry VI.	—	1 17 6	0 2 0	1 17 10 ¹	—	22 10 0	0 13 0	21 9 7
1482	22 Edwd. IV.	—	1 17 6	0 1 6	1 18 4 ¹	—	22 10 0	0 7 6	21 15 0
1483	1 Rich. III.	—	1 17 6	0 1 6	1 18 4 ¹	—	22 10 0	0 7 6	21 15 0
1485	1 Henry VII	—	1 17 6	0 1 6	1 18 4 ¹	—	22 10 0	0 7 6	21 15 0
1509	1 Hen. VIII.	—	1 17 6	0 1 0	1 18 11 ¹	—	22 10 0	0 2 6	22 0 0
* 1527	18 "	—	2 0 0	0 1 0 ³	1 18 11 ¹	—	24 0 0	0 2 8	22 0 0
—	"	—	2 5 0	0 1 0	2 4 0	—	27 0 0	0 2 9	
—	"	—	—	—	—	22 0	25 2 6	0 3 0	24 19 6
1543	34 "	10 0	2 8 0	0 8 0	2 4 4 ¹	23 0	28 16 0	1 4 0	26 8 0
1545	36 "	6 0	2 8 0	2 0 0	2 11 9 ¹	22 0	30 0 0	2 10 0	27 10 0
1546	37 "	4 0	2 8 0	4 4 0	2 15 6	20 0	30 0 0	5 0 0	27 10 0
1547	1 Edwd. VI.	4 0	2 8 0	4 4 0	2 15 6	20 0	30 0 0	1 10 0	31 7 0
1549	3 "	6 0	3 12 0	4 0 0	2 19 2 ¹	22 0	34 0 0	1 0 0	33 0 0
1551	5 "	3 0	3 12 0	—	—	—	—	—	—
—	"	11 0	3 0 0	—	—	23 3 ¹	36 0 0	—	—
—	"	—	—	—	—	22 0	33 0 0	—	—
1552	6 "	11 1	3 0 0	0 1 0	2 19 3 ¹	23 3 ¹	36 0 0	0 2 9	35 17 8
—	"	—	—	—	—	22 0	33 0 0	0 3 0	32 17 8
1553	1 Mary	11 0	3 0 0	0 1 0	2 19 6 ¹	23 3 ¹	36 0 0	0 3 0	33 0 8
1560	2 Elizabeth	11 2	3 0 0	0 1 6	2 18 6	23 3 ¹	36 0 0	0 5 0	—
—	"	—	—	—	—	22 0	33 0 0	0 4 0	32 16 0
1600	43 "	—	3 2 0	0 2 0	3 0 0	23 3 ¹	36 10 0	0 10 0	—
—	"	—	—	—	—	22 0	33 10 0	0 10 0	33 0 0
1604	2 James I.	—	3 2 0	0 2 6	2 19 6	22 0	37 4 0	0 10 0	35 14 0
1626	2 Charles I.	—	3 2 0	0 2 0	3 0 0	—	41 0 0	1 1 5	39 18 7
† 1666	18 Charles II.	—	3 2 0	0 0 0	3 2 0	—	44 10 0	—	44 10 0
1717	3 George I.	—	3 2 0	0 0 0	3 2 0	—	46 14 6	—	46 14 6
1816	56 George III	—	3 6 0	0 4 0	—	—	46 14 6	—	46 14 6

(The preceding Tables, Nos. I. and II., are taken from part II. of *Essays on Money, Exchanges, and Political Economy*, by Henry James.)

* 1527—Henry VIII.] The Saxon or Tower pound was used at the Mint up to this time, when the pound Troy was substituted in its stead. The Tower pound was but 11 oz. 5 dwts Troy; so that, from the Conquest to the 28th of Edward I., 20 shillings in tale were exactly a pound in weight.

† 1666—18 Charles II.] The seignorage on the coinage was at this time given up, and the gold bullion brought to the Mint has ever since been coined free of expense. A seignorage of $\frac{3}{4}$ per cent. was imposed on the coinage of silver by 56 Geo. 3.





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